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ROYAL COMMISSION OF INQUIRY INTO CERTAIN
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND
RELATED MATTERS.

Hearing held
8th floor
180 Dundas Street West
Toronto, Ontario

Rowe:
X: Scott

The Honourable Mr. Justice S.G.M. Grange

Commissioner

P.S.A. Lamek, Q.C.

Counsel

E.A. Cronk

Associate Counsel

Thomas Millar

Administrator

Transcript of evidence
for

August 17, 1983

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DEATHS AT THE HOSPITAL FOR SICK CHILDREN
AND RELATED MATTERS.

Hearing held on the 8th Floor,
180 Dundas Street West, Toronto,
Ontario, on Wednesday the 17th
day of August, 1983.

- - - - -

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner
THOMAS MILLAR - Administrator
MURRAY R. ELLIOT - Registrar

- - - - -

APPEARANCES:

P.S.A. LAMEK, Q.C.)	Commission Counsel
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M. HAYES)	
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	General of Ontario (Crown
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I.G. SCOTT, Q.C.)	Counsel for The Hospital
R. BATTY)	for Sick Children
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	Children
E. MCINTYRE	Counsel for the Registered
	Nurses' Association of Ontario
	and 35 Registered Nurses at
	The Hospital for Sick Children

(Cont'd)



APPEARANCES: (Continued)

H. SOLOMON	Counsel for the Ontario Association for Registered Nursing Assistants
J. SOPINKA, Q.C.) W.A. BOGART)	Counsel for Susan Nelles - Nurse
G.R. STRATHY) E. FORSTER)	Counsel for Phyllis Trayner - Nurse
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G.R. SOLOMON	Counsel for Mr. & Mrs. Hines, (parents of deceased child Jordan Hines)
J. SHINEHOFT	Acting for Lorie Pacsai and Kevin Garnet (parents of deceased child Kevin Pacsai)



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E R R A T A

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Insert in Volume 19 - August 16, 1983

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Page 3478 - Exhibit No. 127: Summary of 36 cases -
Dr. Rowe.

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129	3-page chart containing information on 11 babies.	3656
130	McMaster Univeristy Medical Centre Study referred to.	3686



1

2

DM/ak

---Upon commencing at 10:00 a.m.

3

THE COMMISSIONER: Yes, Mr. Scott.

4

MR. SCOTT: Mr. Commissioner, the

5

chart that I introduced yesterday is being copied.

6

It was assumed from one as wise as I that it could

7

be copied just by photocopying principles, but that

8

produces a mish-mash that is indistinguishable, so

9

it has had to be sent out to be copied in colour and

10

will not return until Monday. Therefore I may have

11

to reserve a number of questions about it to Dr. Rowe

12

to be asked at that time. I thought it was appropriate

13

to have it copied right away. That is Item 1.

14

Item 2, I am very conscious in trying

15

to explain as carefully as I can to the Commission

16

the purpose for which I introduced this New England

17

report and the use I seek to make of it in this

18

Inquiry. Perhaps I might just try that once more.

19

The examination by Mr. Lamek of Dr. Rowe elicited,

20

on a number of occasions, Dr. Rowe's opinion that

21

a number of the babies who died were grossly ill and

22

at risk altogether apart from the possibility of

23

digoxin poisoning and might well have died. He

24

placed some in the inevitable category and some in

25

the high risk category and so on. Mr. Lamek to be

26

fair to him didn't directly say: "Dr. Rowe, I don't

27

28



1
2 believe you", but he probed him extensively on that
3 issue and in one case I recall said, in response to
4 Dr. Rowe's reply "That remains to be seen".

5 He went further, because he has now
6 asked me to produce files of patients who died outside
7 the epidemic period, charts for those patients. I
8 think he and I agree that the only purpose of that
9 could be to determine by comparison whether they were
10 more or less grossly ill than the patients in the
11 epidemic period. That is point one.

12 Point two, the Atlanta Report, about
13 which we all must be discretely silent for a while,
14 makes observations about the gross illness of these
15 patients in the epidemic period.

16 And lastly, Mr. Lamek writes me last
17 week and says this:

18 "I am also interested in having
19 information which may demonstrate
20 the reliability, or otherwise, of
21 Dr. Rowe's assertion that the kind
22 and progress of the terminal events
23 which appear in so many of the charts
24 here under review are common in young
25 cardiac patients."

So there is a challenge.



1
2
3 Now the purpose of this evidence is
4 that the evidence you have so far is the evidence
5 of Dr. Rowe based on his clinical assessment and his
6 knowledge and experience which we recognize is
7 considerable.

8 The New England report is the only
9 North American, and perhaps the only study, the only
10 systematic study in the world which speaks about
11 these issues in a systematic way, it is the Normative
12 study. What I am seeking to do now is to put that
13 study before you, and ask Dr. Rowe to apply it with
14 the appropriate modifications to these babies, to
15 determine whether the study tends to support the
16 assertion, and in that way lead evidence that will
17 demonstrate, in Mr. Lamek's words, the reliability
18 or otherwise of Dr. Rowe's assertions. So that is
19 the purpose for which I put it before you.

20 DR. RICHARD DESMOND ROWE, Resumed

21 EXAMINATION BY MR. SCOTT: (Continued)

22 Q. That having been said. Can
23 I take you, Dr. Rowe, to the New England report and
24 I just want to read you parts of the report.

25 First of all on page 392 under
"Definitions and Methods" under "Associated
Extracardiac Anomalies" the authors write:



1
2
3 "The NERICP coding system allowed for
4 classification of associated non-
5 cardiac anomalies by organ systems
6 selected syndromes and chromosome
7 abnormalities. The extracardiac
8 anomalies were graded as: (1) mild,
9 having no effect on the survival or
10 well being of the infant;
11 (2) moderate, having notable effect
12 on the life or well being of the
13 infant but being amenable to therapy;
14 (3) severe, having major effect on the
15 life or well being of the infant and
16 not being amenable to therapy."

17 Now first of all, when you did the
18 analysis to which we will be coming to in a moment,
19 did you apply those definitions?

20 A. I did with the exception that
21 it is not very clear from those definitions where
22 some chromosomal defects fit.

23 For example, Down's Syndrome which is
24 a fairly common syndrome associated with congenital
25 heart disease would appear to fit in the severe
group, but it could also be interpreted as fitting
in the moderate group because it is just a question



1
2 of how much effect it has on life. I think that is
3 a little ambiguous throughout because they have a
4 special section on Down's Syndrome but they don't
5 say in which category they place it. So I am not
6 sure, I placed it in the moderate group.

7 Q. All right.

8 A. But otherwise I use that
9 classification.

10 Q. You dealt with it conservatively
11 in that sense?

12 A. Yes.

13 Q. And you made judgments of that
14 type where there appeared to be gaps in the analysis?

15 A. Yes.

16 Q. Now dealing with the third
17 group "Severe - having major effect on the life or
18 wellbeing of the infant and not being amenable to
19 therapy". Can you tell us what you understand that
20 to mean?

21 A. Well, this would be a major
22 abnormality of say the brain, exposed on the surface, or
23 no brain. It might be a chromosomal defect in which
24 the natural history of the disease is one in which
25 death occurs within a month or two of birth, regardless
of what might be attempted in terms of surgical
repair of the heart defect.



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Q. What is your understanding of the second part of the Category 3 definition: "and not being amenable to therapy"? There is a conjunction there "and".

6

A. Yes.

7

8

Q. What do you understand medically "not being amenable to therapy" means?

9

10

A. It means that the extracardiac malformation cannot be corrected or repaired in any way.

11

12

Q. Does that point to inevitable death?

13

14

A. Not necessarily, but it would suggest that most of the time.

15

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19

Q. Well now, what about the "moderate category--having notable effect on the life and well being of the infant but being amenable to therapy"? What do you understand from the report that the words "having notable effect on the life of the infant", to mean?

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A. Well you know, I don't know exactly what they mean by that, but I would assume that they mean that certain malformations that affect the bowel, for example, meaning atresias of various segments of bowel or esophagus which are



1
2 fairly frequent congenital anomalies, are incompatible
3 with life unless they are treated.

4 Q. Did you determine, or did you
5 make any judgment as to whether the second category
6 "Moderate" included extracardiac anomalies which
7 were alone life threatening if not treated?

8 A. Yes, there was one.

9 Q. They were or they were not?

10 A. Yes, there was some. There
11 was one in there that was in that category.

12 Q. And that is the standard that
13 you applied?

14 A. Yes. I tried to follow that
15 New England regional thing, it is a little ambiguous
16 but I did the best I could.

17 Q. Now if I can take you to
18 page No. 406, and before I read again I should ask
19 you, are you aware of any other study of the
20 dimensions of this study which is designed to analyze
21 objectively the determinants of survival in
22 pediatric cardiology patients?

23 A. I know of no study that is
24 as broad as this one. There have been particular
25 segments that have been looked at in terms of
prognosis by other groups, but this is the largest



1
2 encompassing all patients.

3 Q. Is this what might be called
4 the normative work?

5 A. I think it is.

6 Q. Now, under determinants of
7 survival there is an opening paragraph that I won't
8 trouble you with. Then it says: "Diagnosis:
9 Predictably the anatomic diagnosis was a major
10 factor in survival".

11 Now, first of all, during the
12 epidemic period was that your clinical impression?

13 A. Yes, indeed.

14 Q. Was it the clinical impression
15 that as far as you were aware was shared by your
16 colleagues in cardiology in North America?

17 A. Yes, it was.

18 Q. And then the authors go on as you
19 showed us yesterday to characterize the diagnosis
20 on a value system from Group 0 to Group 4. Now I
21 want to ask you if you have any comments to make about
22 the way they have done that.
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A. Yes. I think -- it is a grouping system so it doesn't take account of the individual complex malformations although one might easily have added that diagnostic category to Group 4.

Q. Can you give an example?

A. Well, they have been forced by the way they had to deal with this to give a single diagnosis.

Q. Yes.

A. And in fact it is not very often as you have seen that is the case; there are usually multiple associated defects.

Q. Are we talking about cardiac defects now?

A. Yes, cardiac defects.

Q. Let's take a concrete example to illustrate your reservation about this system.

A. Perhaps I could start a bit lower down than the higher-up group.

The reservation about diagnostic Group 1 which would suggest the prognosis is fairly good for that group I believe --

Q. Yes.

A. -- would be that you would



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place an individual in that category who has a
ventricular septal defect as the primary diagnosis.

Q. Yes.

A. And it would be true that
the outlook for that individual could be good, but
it would depend on first of all -- principally on
the size of the defect, and that is not entered into
in that classification.

Q. All those defects regardless
of size go into Group 1?

A. That is right. And obviously
a patient who has a small or a moderate size defect
will have a true Group 1 categorization in terms of
prognosis, but if there are two defects and one is a
large one then the whole picture is entirely
different.

Q. All right.

Now with that reservation about the
coding or grading that New England used, did you try
to apply their system to our patients?

A. Well, in looking at our
patients we had the advantage that it was a smaller
group.

Q. Yes.

A. And we could take into account



B3

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for that reason a multiplicity of associated intra-
cardiac anomalies.

3

4

Q. Yes.

5

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A. So we could categorize
patients much more tightly than the broad group in
which they did, and so that is what we did.

7

8

Q. All right.

9

A. But we used a similar
approach.

10

11

Q. Right.

12

Then could I take you to age of
admission at page 407. "There was a direct relation
between survival and the age of admission."

13

14

First I want to ask you if that was
your clinical impression, and if that impression was
shared by other cardiologists for children in North
America?

15

16

17

A. Yes. I think that for many
years that has been a fairly well accepted clinical
correlate.

18

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Q. All right. Then the author
goes on to say:

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"Dramatic as these differences were
they should be regarded with some
caution since survival was computed

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B4

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to the first year of life rather
than to one year after admission."

And I take it that that means that if a patient came
in in his tenth month the fact that he survived two
months was in effect a plus sign in the study because
it was not analyzed whether he survived twelve months
after his admission?

A. No.

Q. Yes. But they go on:

"Although theoretically the mortality
for those admitted in the first year
of life may be underestimated,
practically as shown in Table 41,
the vast majority of deaths occurred
within the first two months of life."

And that refers to the figure in the chart we talked
about yesterday.

A. Yes.

Q. Now did you take account of
the age of admission as the New England study does?

A. Yes, we did.

Q. Yes. Now the next item is
age ^{at} ~~of~~ operation. And this is a funny one for a
layman because I always thought the sooner you got
operated on the better off you were going to be. This



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suggests the sooner you get operated on the sooner you are going to die.

"There was similar improvement in survival with increasing..."

This, Mr. Commissioner, is page 407, the right-hand column.

THE COMMISSIONER: Yes.

MR. SCOTT: Q. "There was similar improvement in survival with increasing age at surgery."

Now first of all was that your clinical impression during the epidemic period?

A. Yes.

Q. Have you any view as to whether that impression was shared by other cardiologists of your rank in North America?

A. That is a generally shared impression and we have even published on that particular point.

Q. And is the point that surgery occurs earlier in the most obvious cases because they are obvious?

A. The most severe cases.

Q. Yes.

A. Yes.



B6

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Q. Because they are obvious.

3

Their severity is clear.

4

A. Yes.

5

Q. And the authors go on:

6

"All other factors being considered,
the earlier a patient with a given
diagnosis is operated on, the poorer
was the chance for survival. There
was a marked difference in outcome
for operations performed within the
first two months of life as compared
to the rest of the first year."

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Have you tried to take account of
that in your analysis?

14

A. Yes. I think we tried.

15

16

Q. Yes.

17

Now the next heading is birth weight,
and the authors say:

18

19

20

21

"Compensating for all other factors,
there was a direct relationship be-
tween birth weight and survival. The
weight at which this becomes signi-
ficant was about 2 kilograms."

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Now first of all, dealing with the
first sentence, was that your clinical impression at

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the epidemic period?

A. I think our impression was that the weight of the baby was critical.

Q. Yes.

A. I am not sure that our experience would necessarily provide a cutoff at the 2 kilogram level. Recognizing this is a particularly detailed study we have to take cognizance of that. But our general impression is that the babies who are in the lower birth weight range do less well, but I don't know that we could pin it down to 2 kilograms.

Q. Well, can you make a cautious judgment as to where you would be inclined, based on your clinical experience, to make the cutoff point?

A. I think we would have made it about 2500 grams or 2.5.

Q. That is 2.5 kilos?

A. Yes, but, you know, I don't have solid data on that.

Q. Yes.

The next heading and the last is --

THE COMMISSIONER: Sorry, which did you use, doctor, in your --

THE WITNESS: Well, we used --

*clind
have solid
data?*

? Because even setting the cut-off point at 2.5 Kilos, low birth weight is a non-issue in virtually all of our cases?



B8

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THE COMMISSIONER: -- 127?

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THE WITNESS: We actually just provided the information on the birth weights and then looked more at the situation of the growth of the infant and the weight that they were at the time they died, so that we were more impressed by the failure-to-thrive issue directly than we were by the precise birth weight.

9

MR. SCOTT: And that was --

10

11

THE WITNESS: Even though there is a known relationship, yes.

12

13

Q. And that was one of the issues that you dealt with in evidence?

14

A. Yes.

15

16

17

Now the last item I want to read from this report - I read it so I don't have to read it again.

18

19

20

21

Now, doctor, yesterday your summary of these 36 cases was introduced as an exhibit and I think we now have copies for all counsel; even one for Mr. Percival who insisted on it. I hope you will deliver it to him.

22

MR. SOPINKA: He is studying it.

23

24

25

MR. SCOTT: May I ask if everybody



B9

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has their copy?

3

Q. Do you have it in front of

4

you, Dr. Rowe?

5

A. Yes, I do.

6

Q. I just want to take you

7

through it so that we understand it.

8

In the list, of course,

9

are the names and admission numbers of the 36 babies;
is that right?

10

A. That is correct. The

11

history number.

12

Q. The history number.

13

A. The hospital record number.

14

Q. The third column is their

age at death.

15

A. Yes.

16

Q. The fourth column, extra-

17

cardiac malformations, is the presence of a malforma-
tion.

18

A. That was recognized.

19

Q. One or more malformations

20

that were recognized before death?

21

A. Yes, that is right.

22

Q. At my instruction - it may have

23

been right or wrong - but you took no account of

24

autopsy findings?

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A. No.

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Q. Now, I want to deal - well, perhaps I should go through it all so we see what it is. The degree, which is the next column, I take it that refers to the New England analysis and grading of this degree of severity of the extra-cardiac malformation?

A. Yes.

Q. And the next column is the birth weight, and that I take it comes from the Hospital charts or histories?

A. Except where we were not able to find any record of it in the Hospital record.

Q. And then it is noted not recorded.

A. Yes, not known, 'nk'.

Q. Yes. The next column is Failure to Thrive. Where did you get that information?

A. Well, that's a relatively crude judgment made on the basis of the number of facts as shown in the history, particularly the fact that the expected improvement of weight was not occurring as it does in the normal child. It was also influenced by whether the patient was having special attention from the Nutritional Division of the Hospital and it is subject to some further analysis. I would personally like to get that further looked at by the



C.2

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nutritionists and it was just an eyeball, from my
going through the charts, as to whether the baby
seemed to be failing or not. There were some
problems with the classification in very young babies
because you can't really say a baby is failing to
thrive for a few weeks after birth because they're
still catching up with their own birth weight.

8

So that in the smaller babies it's a
bit difficult to reach a decision.

10

Q Well, first of all, I take it
the judgments - first of all, a plus in that column
means that the baby did not appear to thrive?

12

A. Yes.

13

14

Q. A zero means that the baby
appeared to thrive?

15

A. Yes.

16

17

Q. And the second thing is that the
judgment about this was made by you alone?

18

A. Yes.

19

Q. And I take it it was made by
reference to the Hospital chart?

20

21

A. Yes, as best as I can tell from
this.

22

23

Q. And I take it from the Hospital
chart you drew any observations that nurses or doctors

24

25

Because so many of his recorded
birth weights are wrong. This
determination must also be
suspect!



C.3

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may have made on the record?

3

A. Yes.

4

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Q. And you looked also at weights to determine whether the baby was increasing weight normally?

6

7

A. In relation to the birth weight?

8

Q. Yes.

9

A. Yes.

10

11

Q. And the reservation you had was that for the first weeks you can't make a satisfactory judgment on that question?

12

13

A. Yes, and I think that to give it a better perhaps precision it would be useful to have an independent look at that by a nutritionist.

14

15

16

Q. Yes. Now, the next column Post Mortem, the pluses indicate that a post mortem was done?

17

A. Yes.

18

19

20

Q. And that will be important for some questions I want to ask you later, but I take it that you did not consider anything found in the post mortem report in doing this analysis?

21

A. No, I didn't.

22

23

Q. And then Post Operative, the last column, does that refer to the fact that before

24

25



C.4

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death surgery had been performed?

3

A. Yes.

4

Q. And a plus means that surgery
was performed?

5

6

A. Yes.

7

Q. And a zero means it was not?

8

A. Yes.

9

10

Q. Yes. Now, I see on one or two
occasions you have plus late. Now, would you tell
me what that means?

11

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A. Well, that means that the surgery
was done some considerable time before, either months
in the case of Dawson or years in the case of Murphy.
The others represent surgery that was done during
their time in the Hospital.

15

16

17

18

Q. And I take it that if the
surgery was done months or years before, you thought
the plus was devalued in terms of comparing your
analysis to New England?

19

A. Yes.

20

21

22

23

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25

Q. Yes. Now, if I can take you
again to the extracardiac malformation. You've listed
where those malformations exist their names, and I
take it that in some cases you have more than one
malformation?



C.5

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A. Yes.

Q. Yes. And you have then characterized it in terms of mild, moderate, and I take it those are the classifications that New England used?

A. With the exception that I'm not sure where they put the Down's group.

Q. Yes, but you conservatively put it in moderate?

A. Yes.

Q. And I think you told us that moderate included to you an anomaly that was life threatening but which might be repaired?

A. Yes.

Q. Well now, you did a summary of this analysis.

A. Yes.

Q. Which is page 3 of the sheets, is that correct?

A. Yes. Well, I don't know that they have numbers on them but it is the third sheet.

Q. Well, housekeeping is my responsibility and it's not going to be all that well done, I'm sorry, we haven't got numbers.

THE COMMISSIONER: Well, the third sheet is page 4 I think.



C.6

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MR. SCOTT: I'm sorry, it's page 4.

THE COMMISSIONER: Yes.

MR. SCOTT: Q. Well now, I just want to - it is perhaps obvious how to read this but the first figure at the top is that 22 of the patients were male and 14 were female. When you come to age, which was a factor that is charted in New England, I just want to be sure that I can read this. Which way do those little arrows go now? Pointing out means what?

A. Pointing out means less than.

Q. Yes.

A. And pointing in means greater than.

Q. Yes, after I've been here about three months I'll have that down.

MR. SOPINKA: I don't have any arrows.

THE COMMISSIONER: No, they have some arrows but they ...

MR. SCOTT: They didn't copy all that well.

Q. Can you just read across the first line, Age, and say what those should be and we'll put in the arrows where they don't appear.

A. There are three different divisions into age groupings of those 36 individuals.



C.7

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The first one says less than 2 months, 22, and
greater than 2 months, 14.

3

4

Q. So, that's how the 36 babies
broke out at the 2-month dividing line?

5

6

A. Yes.

7

Q. All right.

8

A. We broke it at that point because
that's where the New England seemed to place some
emphasis.

9

10

Q. Yes.

11

A. If we take it as equal to or less
than 4 months it is 27 and greater than 4 months is 9.

12

13

THE COMMISSIONER: These are all at
date of death, I take it?

14

15

THE WITNESS: These are the age at death.
And the last group is just to demonstrate how many
babies were neonates or newborn babies and there are
16 that are in that category.

16

17

18

MR. SCOTT: Q. So, in the third
column you've numbered the ones who are younger than
a month?

19

20

A. And older than a year.

21

Q. And older than a year.

22

A. Yes.

23

Q. Well now, the next heading is

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C.8

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Extracardiac Malformations. What do you show there?

3

4

A. Well, there are about a third of the babies who showed some recognizable form of cardiac malformation.

5

6

Q. The figure in 'New England was 28 per cent, was it not?

7

8

A. Yes. So, it's about the same.

8

9

Q. All right. And you've characterized them according to the NERICP definitions?

10

11

A. Yes, except for this Down's question.

12

Q. Yes.

13

A. At least I'm not sure whether it's an exception or not.

14

Q. Now, birth weight?

15

16

A. Birth weight, I simply took 2500 grams because of our preference for taking babies under that weight as being low birth weight.

17

18

Q. Yes.

19

A. And where it was recorded out of the 32 it was recorded there were about 20 per cent.

20

THE COMMISSIONER: That was less than?

21

THE WITNESS: Equal to or less than

22

2500 grams.

23

MR. SCOTT: Q. Right.

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A. And the mean birth weight for all patients was 2.9 kilograms for those where it was recorded. I haven't calculated the median weight.

Q. Just so I will understand you. The median weight I take it is the average weight, if you add them all up and divide by the number of weights?

A. That's the mean weight.

Q. That's the mean weight?

A. Yes.

Q. The median weight is the ---

A. The middle patient in the 36 - the 19th patient or the 18th patient.

Q. I see. You see, I know what both those are, all I don't know is which is which.

Now, the next item, Failure to Thrive, what did you find there?

A. This is, as I have said, it's not quite as precise a group as I would like to see it. I took those numbers and out of the 36 patients there were 20 that in my view had either failed to thrive or were small for gestational age and therefore were not thriving well for that reason alone.

But as I say, it would perhaps be more helpful to have a nutritionist look at that group, but at least it gives an idea of the extent. It's



C.10

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probably an under-estimate if anything, but at least somewhere around half of the patients were not thriving.

3

4

5

Q. All right. Now, the next is the number of autopsies done out of the 36, is that right?

6

7

A. Yes.

8

Q. Now, that figure has no bearing, does it?

9

10

A. Not on what we're talking about, only just to indicate that autopsies were done in three-quarters of the patients.

11

12

Q. And the next figure is Post Operative, and do I understand that that is the number of patients who died following surgery?

13

14

A. Who died at some period after the surgical repair.

15

16

Q. Now, in order to get your 16, did you include the late surgeries or the late deaths?

17

18

A. Yes, I think I did, yes.

19

Q. Yes, all right.

20

A. That was put there to give an indication of just how many of the patients who died who had had some previous attempt to help them surgically.

21

22

23

Q. Well then, on the basis of that

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record and those analyses in each case without looking at the moment of death or the autopsy, did you attempt to prepare a prediction of the outcome based on condition prior to death?

A. Yes, we did.

Q. And is that the next page?

A. That's the next page.

Q. And can you describe each of the three categories for us?

A. Well, the categories are arbitrary first of all and there are many different ways of attempting to predict outcome and we have entered into that exercise on other occasions, but for the purposes of this ---

Q. Well, everybody is doing it, so, we might as well try.

A. For purposes of this particular study it was suggested we might look at those in whom death was inevitable in our view prior to the time that they died.

Q. All right. 'Now, if I can stop you right there. We're looking at the information available prior to their death and you judged it to be inevitable. What did inevitable mean?

A. That there was no other possible



C.12

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course or outcome for that patient.

3

4

Q. All right. Did it speak to any time frame in which that death might occur?

5

A. Not specifically.

6

7

Q. No. Did it speak generally? Is that part of the definition of inevitability?

8

9

A. Yes.

10

THE COMMISSIONER: There had to be some time frame though.

11

THE WITNESS: Yes.

12

MR. SCOTT: Either that or the Commissioner or I get in the first column.

13

THE WITNESS: Yes.

14

MR. SCOTT: After you, my Lord.

15

THE COMMISSIONER: I hope I'll survive until this report is out, that's all.

16

17

MR. SCOTT: Well we all do, partly because we admire you but partly because we wouldn't like to begin over again.

18

19

Q. What ^{is}~~does~~ the component that you're thinking of in terms of time frame when you list the death as inevitable?

20

21

22

A. Well, I would think we would anticipate within some short period of time but I can't go further than that.

23

24

25



C.13

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Q. Are you talking about months or
years?

4

A. Not years, no.

5

Q. No.

6

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A. I think that since we were looking
at this in relation to the New England program we were
talking about the probability of death before the
outcome in relation to first year of life. So that
for the purposes of this analysis it would really
simply be enough to say that we would expect that
death within the first year was inevitable in those
patients.

13

14

15

Q. Is there built in the Inevitable
category any consideration about whether there is
possible surgical or other repair or treatment or is
that excluded?

16

17

18

19

A. No, that's built in too because
we would not categorize someone as inevitable if there
was a real possibility that they could benefit from
the surgery.

20

21

22

Q. So, you're thinking about a year
and you're excluding from the first category anybody
for whom anything might be done which could reasonably
prolong that life beyond a year?

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A. Well, as best as we could judge
that, yes.



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Q. Now, what is the high risk death category?

A. Well, I think the high risk death, we have put a figure there of 40 per cent to 80 per cent risk, you know, that is an arbitrary figure and it could be debated. We didn't regard that risk as high as the first column obviously, because we thought there were things that might be offered, but they nevertheless had sufficient derangement of anatomy and function that we would be very guarded about consideration that they might survive the first year.

Q. Doctors in medical reports and in charts use the expression "guarded" quite frequently, what does "guarded" mean in terms of these three categories?

A. Well guarded would be applicable to all of the higher risk death category, and would be applicable to some patients in the lower risk category. It would not be applicable to the first column of inevitable deaths because we know they are going to die.

Q. But do I understand that when you see the word "guarded" is that a negative prognosis?



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2

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A. Yes it is.

3

Q. Or a positive prognosis?

4

A. No, it is a negative prognosis.

5

Q. Well now I take it Dr.

6

Freedom was doing this exercise at our request at the same time as you were?

7

8

9

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11

12

A. Yes he did. He had the list of patients and independently I asked him to assign patients to those three columns, and he did so, and then when he had done that and after - I did mine first and he did his independently and then we compared the two lists.

13

Q. Was there any substantial difference?

14

15

16

17

18

19

A. No major differences. We had minor differences in movement of patients, in one or two patients from the low risk to the high. From the inevitable list to the high, and the high risk to the inevitable, but these were, I think there were a total of about four shifts, that's all.

20

21

22

Q. Now after autopsy, after an examination of the autopsies that is: Let me put it this way. Having done this exercise, did you then examine the autopsies?

23

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A. Yes. The information that we



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were strict about, we knew what the autopsy information was of course, but we purposely avoided that consideration in assigning a patient to an inevitable death, we made that decision based on the clinical investigation and our impression at the time.

Q. Did you then turn to the autopsies?

A. Yes.

Q. To see whether you would learn anything new from the autopsies?

A. Yes, we did.

Q. First of all, let me ask you, did the results of autopsies which were done in most of these cases lead to any movement on the lists? In other words did you find out things after the patient died about his condition that you didn't know, that led you to move him?

A. Yes, but only in two patients.

Q. And which patients were those?

A. Monteith and Taylor.

Q. And they are on the high risk death list?

A. Yes.

Q. And what would you have done with them?



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4

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A. We put them in an inevitable

3

group.

4

Q. Were there any other changes

5

that the autopsy studies dictated or suggested?

6

A. No. They added information

7

to what we already knew. For example, in Woodcock,

8

we would have raised the percentage, as it were, in

9

that lower risk category to a higher state than we

10

would have before the autopsy, but it didn't move

11

that patient out of the relatively lower risk.

12

Q. And to what extent did the

autopsies confirm the clinical information you had?

13

A. I think it confirmed practically

14

all of it.

15

Q. Now I take it, just so that

it will be clearer, the page that ties into the

16

New England study is the fourth page.

17

A. Yes.

18

Q. The fifth page is an analysis

that was done in individual cases using the criteria

19

of the New England study but it doesn't directly tie

20

into it?

21

A. Using somewhat similar criteria

22

but not exactly the same thing. We had the advantage

23

here, as I have said before, of feeling much more

24

25



1
2 confident of dealing with individual cases, an
3 individual anatomy.

4 Q. Now Mr. Lamek asked you several
5 times to characterize the patients with whom you had
6 to deal in the epidemic period in Wards 4A-4B, and
7 to characterize the patients who died. What does
8 this review tell you about the condition of the 36?

9 A. Well I think that this tells
10 us that there was a very substantial proportion of
11 the 36 that had serious disease with a higher risk
12 of dying.

13 Q. When you talk about serious
14 disease, I take it you are talking about cardiac
15 disease?

16 A. Yes.

17 Q. In appropriate cases extra-
18 cardiac anomalies?

19 A. Yes.

20 Q. Accompanied by the age criteria,
21 failure to thrive and so on?

22 A. Yes.

23 Q. Now just one moment because I
24 am not clear. At the bottom of the last page you
25 exclude the three older patients. I take it these
were patients who were really in their early teens I



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think one was 11 perhaps.

3

A. Yes.

4

Q. Young Heyworth was 11?

5

A. Yes.

6

Q. Do I understand that you

7

excluded them and therefore did not place them on
the lists, inevitable death, high risk, or low risk?

8

A. Yes we excluded them.

9

Q. Why was that?

10

A. We excluded them because we

11

were looking at this from the point of view of the
infant group outcome within the unit.

12

Q. Now I want to turn to another

13

matter and that is the business of hospital charts.

14

The Commission has before it the hospital charts for

15

these babies and the notes that are made on those

16

charts have been referred to extensively by Mr. Lamek.

17

THE COMMISSIONER: We went through this

18

before, at least I thought we had decided the hospital

19

records as opposed to hospital charts. The charts,

20

we finally decided the only solution was to call the
picture a diagram and the record a record.

21

Now, if you want to we can go back

22

and change that to charts. Is the chart the term

23

that is used in the hospital?

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THE WITNESS: Yes, that is the term that is used, but the official term I believe is hospital record.

5

6

MR. SCOTT: The Act always uses a different word to describe an object which is commonly identified otherwise by the public.

7

8

THE COMMISSIONER: I don't know, if it is not offensive to you can we use the term records.

9

10

MR. SCOTT: Yes, that is all right.

THE COMMISSIONER: And we won't use the word chart at all.

11

12

MR. SCOTT: All right.

13

14

15

16

Q. Well, let us talk about the records, and I want to do so, Dr. Rowe, because Mr. Lamek quite naturally depended extensively on them in questioning you, and I want to talk particularly about nursing notes.

17

18

Now first of all the nurses in these wards, together with other nurses in the hospital, work on shifts, is that correct?

19

20

A. Yes.

21

22

Q. Is there any obligation on them to make a note during the course of their shift?

23

24

25

A. I don't know what the rules are, but I assume that is the case.



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Q. What is the practice?

3

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A. The practice is that they do
write a note on the chart.

5

6

Q. So do I understand that if
nothing happens, what does the nurse do?

7

8

9

A. Still writes a note.

10

11

Q. That is the symbol that she
was there and in attendance no doubt. Now, would you
tell me what things nurses are expected to note?

A. Well I can speak only from
having observed many nurses' notes.

12

13

14

15

16

Q. Yes.

A. And the practice that seems
to be the case in our hospital. Nurses make notes
in a reasonably uniform way that look at specific
aspects of the baby, or the child, or the patient's
behaviour. They will always identify vital signs.

17

18

Q. What are vital signs just so
I know.

19

20

A. These are the heart rate, the
rate of breathing, and usually the blood pressure,
but not at every observation.

21

22

Q. So they will note the vital
signs?

23

24

25

A. And they will make comments



1
2 about the vital signs if there is something unusual
3 about them. That is if the heart rate is faster at
4 a particular time than another time, they would make
5 comment on that, or, slower?

6 Q. Yes.

7 A. They make comment on the
8 regularity of the heart beat. As far as breathing
9 is concerned they might not only note the rate of
10 breathing, but the way in which breathing is carried
11 out by the baby, whether the baby is having difficulty
12 with breathing. Whether the baby has noisy breathing,
13 or whether there is some major effort being expended
14 by the baby in getting air into the chest, or air out
15 of the chest. So there will be comments like; tugging,
16 dysrhythmia and so on. Then there is usually some
17 indication about the nutritional situation. Feeding,
18 whether there is any regurgitation of feeds, or vomiting,
19 or whether there is any difficulty with feeding. The
20 presence of diarrhea, or vomiting, and how well the
21 baby takes the feed, how long it takes to feed and
22 so on, if there are problems.

23 There is usually a note about whether
24 the baby has voided, or had a stool or something of
25 that sort. Anything to indicate the excretion aspects
of a patient. There may be other comments about the



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general pattern of behaviour in regard to sleep, or
colour, or to irritability.

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There is, very frequently, because
it is part of the nursing involvement a comment about
the parents visits and their reaction, or the parents
interaction with the baby, or the child. There will
be a comment on occasion if a doctor is called, or
if there is a concern about which a doctor may be
called by the nurse.

10

11

Q. There is a note usually that
the doctor is called and who he is?

12

13

14

A. They frequently do say that.
I don't know how often that occurs but it is, I think
it is usual practice to identify the physician.

15

16

17

Q. Does that, generally speaking
there are variations in individual practice, but does
that generally speaking cover what is expected at
your hospital that a nurse will note?

18

19

20

A. I think so, you may have to
ask a nursing specialist what they hope would be put
down, but that seems to be fairly consistent.

21

22

Q. Is that conclusion about your
practice justified by your review of the records in
these 36 cases which contain nursing notes?

23

24

25

A. Yes, I think it is helpful to



1
2 have those notes very much.

3 Q. Would it be fair, and tell me
4 if I am wrong, would it be fair to characterize these
5 notes as containing the grossly visible observations
6 that the person with a nurse's training would be
capable of making?

7 A. Yes.

8 Q. Now apart from nurse's notes
9 in the record, are there things that a physician wants
10 to know that are not found in the note?

11 A. In the nurse's note?

12 Q. In the nurse's note.

13 A. Yes there will be a number of
14 things there.

15 Q. What sorts of things does a
16 physician in charge of the case want to know that will
not be found in the nurse's note?

17 A. We are talking about cardiac
18 patients I presume?

19 Q. Yes, we are.

20 A. Then I think there are important
21 aspects of the information that is available from
22 examining the patient that is not reported in a nurse's
23 note. An example would be heart murmurs. Now many
babies have heart murmurs who have heart disease and

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the presence of a heart murmur doesn't in its, just
by itself, tell you anything, but the change of
behaviour of a heart murmur, or the appearance of a
new murmur may give a real indication of alteration
in the patient's condition, it may be not apparent
from the nurse's note alone, at least not initially.

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There may be things that will happen subsequently that will identify themselves in disturbance of vital signs to the nurse, but there can be changes of the sort in heart murmurs which are important.

Another thing would be liver size. The size of the liver, especially in a serial fashion in a baby or an individual, is a good indication of the fact that the patient's degree of heart failure may be changing, and liver size is not a physical sign that is reported by nurses. They are not obliged to do that and they are not trained to do that. So that liver size would be something that they would not record.

Now certain nurses who are nurse specialists in certain areas might be trained to do that, but in the cardiac ward we didn't have anybody in that category.

Q. I just want you here to deal with things that you would not expect a nurse either by training or practice --

A. Yes.

Q. -- to record in her notes.

A. Yes.

Q. But which you would want to



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know as the physician. And you have dealt with
heart murmurs and the size of the liver.

4

A. Yes.

5

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Q. And the changes in the pace
of the murmur. Now is there anything else that you
can add to that list?

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A. The development of changes
in the intensity of the heart sounds, or the loudness
of the heart sound and the development of what we
call gallop rhythm which is a triple rhythm. Instead
of the usual two-sound cadence of heart sounds the
addition of a third heart sound is called a gallop
rhythm, and that is an indication of cardiac stress
from heart failure.

15

THE COMMISSIONER: Is that not
apparent from the vital signs?

16

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THE WITNESS: Nurses would not be
trained to detect gallop rhythm. They can detect
heart rate and it is a subtle sound, and they are not
trained to detect that.

20

MR. SCOTT: Q. Anything else?

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A. The presence of rales in the
chest or crepitations - rales, r-a-l-e-s, and
crepitations are additional signs that may indicate
infection or fluid in the lungs. And while wheezing



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and that type of symptom or sign may be apparent to nurses and they may describe on occasion "noisy chest", the minutiae of that is unlikely to be revealed except by a physician. So that rales or crepitations are an indication or can be an indication, especially if there is serial observation of change in the patient's hemodynamic status.

Q. When you say "serial observation", do you mean observation over a period of time?

A. Yes.

Q. Keep it simple for me now.

A. That is the sort of thing that I mean.

The question of determination by a physician as opposed to a nurse of subtle changes in colour or degree of cyanosis in a baby is an old problem.

I don't think that generally there is much difference between a physician and an experienced nurse in this regard, but I think there are occasions when there are differences of opinion about that. So it is an important issue of degree of cyanosis; though nurses make comments on that too.

Q. Anything else?



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A. I think those are the main

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points.

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Q. All right.

5

A. Other than other investiga-

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tions that might be directed by a physician.

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Q. Are those in assessing a

8

patient, are those matters not normally shown in the

9

nurse's notes about which the assessing physician

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A. Would you repeat that, please.

11

Q. If a doctor is there to

12

assess the condition of a patient in any day are the

13

matters that you have just described things that he

14

will want to know which are not normally found in the

15

nurse's notes?

A. Yes.

16

Q. And are they of minor or

17

critical importance or somewhere in between?

18

A. They are of major importance.

19

Q. Right. And I take it that

20

they are -- let me put it this way: Do they bear at

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all on the assessment of the fourteen kinds of

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difficulty that may lead to heart stoppage that we

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discussed yesterday?

A. Yes, they do.

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Q. Now the Sick Children's,
along with a number of other hospitals in Toronto,
is a teaching hospital?

A. Yes, it is.

Q. Which means it is affiliated
with the university and is responsible for training
young doctors?

A. Yes.

Q. And cardiology is no
exception to that?

A. No.

Q. Now will you tell the
Commission - we may have had it before - how the
ward is staffed in terms of doctors.

A. Well, at the time of the
epidemic period --

Q. The relevant time.

A. -- the staffing of physicians
was that there would be a Ward Chief or responsible
physician who was a cardiologist.

Q. Yes. Was he responsible for
one of the two wards or both wards?

A. He was responsible for both
wards.

Q. Yes. And was his responsi-



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bility a 24-hour responsibility?

A. His responsibility was on a daily basis for a month during an arbitrary working day period which was 8:30 to about 4:30 or 5:00 p.m.

Q. Month about?

A. Yes, month about.

Q. So there would be the Ward Chief, one for each of these wards?

A. Yes, and then there was a cardiac fellow --

MR. LAMEK: Is that one for each ward?

THE WITNESS: One for both, I'm sorry. Thank you.

THE COMMISSIONER: One of which?

MR. LAMEK: One covering both.

THE WITNESS: One staff cardiologist for the two wards, for A/B.

THE COMMISSIONER: I'm sorry, the Ward Chief?

THE WITNESS: Yes.

THE COMMISSIONER: We have been through this before and it is in the Statement of Facts as well, but I guess we never properly understood it. The Ward Chief is a cardiologist. It is not a title;



E7

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it is an occupation for the day?

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THE WITNESS: Yes.

4

THE COMMISSIONER: He is not the
chief cardiologist. You are that.

5

6

THE WITNESS: Yes.

7

THE COMMISSIONER: You are not on
duty every day?

8

THE WITNESS: No. I'm on duty.

9

Not every day.

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THE COMMISSIONER: Not every day,

11

but you would sometimes be the --

12

THE WITNESS: The Ward Chief.

13

THE COMMISSIONER: Yes. And
sometimes you would not?

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THE WITNESS: Yes.

15

THE COMMISSIONER: Every other

16

doctor would also be?

17

THE WITNESS: Every staff cardiolo-

18

gist would be Ward Chief at some time.

19

THE COMMISSIONER: At some time. And
then you say there is one staff cardiologist?

20

THE WITNESS: He is the staff

21

cardiologist.

22

THE COMMISSIONER: So he is the

23

same man?

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THE WITNESS: Same person, yes.

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MR. SCOTT: Q. Is he a specialist
at the Royal College?

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6

A. Yes, he is a specialist in
pediatric cardiology.

7

8

Q. All right. He is the Ward
Chief, and just to clear it up as Ward Chief he
supervises both 4A and 4B?

9

10

A. During the hours of 8:30 to
5:00.

11

12

Q. 8:30 to 5:00 for one month?

A. One month.

13

14

Q. Including Saturdays and
Sundays?

15

16

A. Sundays and Saturdays and
evenings there may be another Ward Chief.

17

18

Q. Let's deal with the daytime
first of all. In addition to Ward Chief are there
any other doctors on the ward?

19

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A. There is a cardiac fellow.

Q. Yes.

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A. That is a trainee in pediatric
cardiology whose background is that he is a trained
pediatrician and is undertaking extra training in
cardiology.

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Q. Yes. Does he work the same hours and shifts as a Ward Chief?

A. Yes.

Q. More or less?

A. Yes.

Q. All right. Anybody else?

A. Then there were three residents. Now these are pediatric residents who are physicians training to be pediatricians, and they are part of the Department of Pediatrics' rotation through the different wards of the Hospital, and they go for periods that are about five to six weeks.

Q. In cardiology?

A. In cardiology.

Q. What are their hours so to speak?

A. Well, their hours are rather similar to the others.

Q. 8:30 to 5:00?

A. Well, I think they start at about eight o'clock and go till about 5:30.

Q. All right. Now is that the daytime complement of medical men or women on Wards 4A and 4B?

A. That was the situation in the



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period that we are concerned about.

3

Q. Yes.

4

Now what about after five?

5

A. After five there would be

6

a handover of responsibility to a different staff
cardiologist who is on duty for that evening.

7

8

Q. He is not called a Ward

Chief?

9

A. No, he is not.

10

Q. All right.

11

A. He is just a staff cardio-

12

logist who is familiar with the events of that ward
through other mechanisms and by handover.

13

14

Q. But in terms of training is

he of the same level as the Ward Chief?

15

A. Yes, indeed.

16

Q. Indeed he may be Ward Chief

17

next month?

18

A. Yes, he might be a Ward Chief -

19

a Ward Chief would have to spend his night on duty
too.

20

21

Q. All right. So when you have

22

a Ward Chief on duty in the day and a staff cardio-
logist at night, you have people of precisely parallel

23

expertise in charge?

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A. Yes.

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Q. All right. Who else do you

4

have?

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A. And we have a cardiac fellow

6

for the night.

7

Q. Yes.

8

A. And we have one pediatric

resident for the nightshift.

9

Q. All right. I will be coming

10

back to these records in a minute, but I just want to

11

get who is there.

12

Will you tell us what rounds are

13

in the cardiac ward.

14

A. The rounds that are done are

some official rounds and some unofficial rounds.

15

Usually the staff cardiologist or Ward Chief, the

16

Ward Chief of the month does the rounds on the ward

17

formally twice a week.

18

Q. All right.

19

A. And he may do them informally

more often than that, but he rounds on a formal basis

20

twice a week with his group of appropriate staff and

21

nursing groups.

22

Q. Well now -- I'm sorry, go

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ahead.

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A. And then there is one additional round that he does a week so that makes three rounds a week, with the surgical people, the surgical staff.

Q. All right. So he does two formal rounds a week.

A. Actually three formal rounds a week.

Q. Yes. One of which has surgical input?

A. Yes.

Q. Then he may do informal rounds.

A. Yes, at any time.

Q. And is that a matter of discretion with him?

A. Yes, but he has to see every new patient, and so he has to see patients and see sick patients so he has to do sort of a round at least every day.

Q. But apart from the rounds of the Ward Chief, the cardiac fellow and the three residents during the day, the same team with only one resident during the night, are on the ward available as babies' health may require?



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A. Yes. At night the cardiologist is not necessarily on the ward, nor is the cardiac fellow, but the resident is on duty in the ward.

Q. Yes.

A. And available in the building.

Q. Now on rounds, who goes on rounds?

A. The group. That is the Ward Chief, the cardiac fellow and the residents, together with one of the nurses.

Q. All right. So do I have it that on the three formal rounds you have all the doctors responsible during that shift (during the day it will be five) and whatever nursing assistance they may require?

A. Yes.

Q. And they visit --

THE COMMISSIONER: I am not sure that is quite what you said. You said one resident. Do you mean all three residents go on these formal rounds?

THE WITNESS: Formal rounds are done during the daytime.

MR. SCOTT: Q. Yes.

A. So all of them will be there for that.



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F/BB/ak

THE COMMISSIONER: So, the three residents ---

THE WITNESS: Three general pediatric residents and the Cardiac Fellow and the ward chief will do the rounds.

MR. SCOTT: Q. So, you have five doctors.

A. Except for the surgical round when there's an addition of about another five or six.

Q. Surgeons?

A. Surgeons, yes.

Q. So, the two formal cardiac rounds there will be five doctors?

A. Yes, at least five.

Q. Yes, at least five and on the cardiac surgical round, which is at least once a week, there will be probably 10?

A. Yes.

Q. And I take it that what you do is that team may have a nursing administrator or nursing adviser one or more with them.

A. Usually the head nurse or the assistant head nurse.

Q. And do I understand that



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they visit every baby on the ward?

A. Yes.

Q. And that's required?

A. Yes.

Q. And what do they do when they
come to the baby?

A. Well, they discuss the status
of the baby. The resident gives a summary of where
the situation is. If it's a new patient he goes into
more detail than another, but goes over the status,
the diagnosis, the current medications, the problems.
It is really a management consideration.

Q. Well, for lawyers, would it
approximate a kind of a seminar at the foot of the
bed or in the room?

A. Sometimes it does but it
wouldn't be as perhaps lengthy as a seminar.

Q. All right. And is the case
and its history presented by someone?

A. Yes.

Q. Is there questioning?

A. Yes.

Q. Are there hypotheses advanced?

A. Yes.

Q. Is there a review of



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possibilities and options in terms of disease and
management and so on?

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A. Yes, that's the purpose.

5

Q. And is some analysis or

6

conclusion drawn at the end of it?

7

A. Usually.

8

Q. Yes. And then they move on?

9

A. And then they move on.

10

Q. All right. Now, what about

11

note taking in that exercise?

12

A. Well, note taking in that

13

exercise, I think nurses are traditionally better

14

note keepers than physicians and they generally take

15

notes, or at least, I see them writing things down,

16

so, I presume it's notes they're writing. The

17

physician, the resident physician, the pediatric

18

resident physician usually makes a note in the chart

19

after the rounds, but not always, but that's supposed

20

to be what goes on.

21

Q. You see, the reason I ask you

22

the question is that it strikes me that, and this is

23

just a layman's opinion, having seen it only once,

24

it strikes me that that perhaps, that that round,

25

when a baby is visited, is a fairly intensive and

26

thorough examination of that baby's background,

27

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present state and future prognosis. Am I wrong about that?

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A. No, that's correct.

5

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Q. With between 5 and 10 doctors in presence, in physical presence of the baby?

7

A. Yes.

8

9

Q. All right. Now, little of that expertise appears to show up in the record?

10

A. That's correct.

11

Q. Whose responsibility is it to make the record?

12

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A. Well, the ultimate responsibility is the ward chief.

14

15

Q. But let me ask you this. In a teaching hospital is there a practice about the discharge of that responsibility?

16

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A. Yes, it's usually expected that the resident will write the note.

18

Q. Yes.

19

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A. Unless there is some very particular issue that the ward chief thinks he should add something more to.

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Q. And why is that done?

23

A. That's done as part of the educational and training process of physicians.

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Q. All right. Well now, if you heard that baby had died on the cardiac ward, let's say last week, about whose condition you were concerned, you would have access to the record which would have the nurse's notes as we've seen.

A. Yes.

Q. You would have access to any note that the pediatric resident made of rounds, if any?

A. Yes.

Q. Now, who would you want to talk to to find out about that baby?

A. To find out about a baby who had died?

Q. Yes, about the baby's condition prior to death?

A. Well, you would want to talk to both the pediatric resident, the general pediatric resident who is the sort of first line physician, the Cardiac Fellow and the associate resident who would be the member of the team that came to do the resuscitation.

Q. Is it the practice to obtain from them information that would not be found in the hospital record?



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A. There may be additions to that. We don't usually speak to the associate resident in my experience because he's written a very complete note of what he's done and what he's been called for. But there may be occasions when we'll want to check some point with him. But we do need to flush out sometimes the comments of the Fellow and sometimes of the resident.

Q. All right. And what about the comments of the chief?

A. Yes, you would want to know exactly what the ward chief thought about it, or the cardiologist who was on call for the evening.

Q. And I take it that that information, what the cardiologist thought about it, would not be in the record unless the pediatric resident had seen fit to make a note of what the other man thought?

A. It depends. It depends upon whether the physician reaches the hospital to look at the death situation when he's called. If he comes in - if the death occurs, say, at 4 o'clock in the morning and he comes in at 7:00 the record might be in the Medical Records Department, so, he can't make a note in it. But if he's called in he will



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usually make a note in the record.

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MR. SCOTT: I want to move to

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a new subject, is now a convenient time to take a
morning break?

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THE COMMISSIONER: Yes, all right,

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15 minutes.

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---Short recess.

9

---Upon resuming.

10

THE COMMISSIONER: Mr. Scott?

11

MR. SCOTT: Q. Dr. Rowe, Miss Cronk

12

asked me to clear up one thing about the staffing or,
actually, two things about the staffing of the wards.

13

We've heard about interns and I think I can lead you

14

through this, there is no dispute we just want to

15

have it on the record, two years of internship are

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required after a doctor obtains his MD and before he
can practice in public, is that correct?

17

A. I'm not sure whether it's one

18

year or two.

19

Q. Yes, but that's a licensing

20

requirement?

21

A. Yes, there is a licensing

22

requirement.

23

Q. Yes. I take it that at your

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hospital a doctor who was interested in doing

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pediatrics is permitted to do one interning year in
pediatrics?

A. Yes.

Q. I take it also that doctors
who want to do pediatrics and have already interned
come on as residents?

A. Yes.

Q. And do I have it right that
you make no distinction between whether the resident
is a resident who has already done his internship or
is merely a resident who is doing his internship?

A. As far as the first year of
the program is concerned.

Q. Yes. So, you are not concerned
about whether the pediatric resident is doing his
year to meet the licensing requirement or to develop
a speciality in pediatrics?

A. No, all we're interested in
is that we have to know which year, which level he is
in the pediatric three year program.

Q. Yes. And do I take it, and I
think you told me this and I just think we should
have it for completeness, that usually about one out
of three of the residents is doing his internship in
pediatrics?



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A. On the ward resident rotation, that has been the case - that was the case during the epidemic period.

Q. All right. Now, one other question just to be complete. I take it that in January, '81, in the middle of the epidemic period, an extra resident was assigned to the ward.

A. Yes, that made four residents, four general pediatric residents instead of three.

Q. Yes. Now, you've told us about the ward chief's round and the ward chief's rounds that occurred with the surgical team. Do the residents perform rounds as well and in addition to the rounds you've described?

A. Yes, they do, everyday.

Q. Yes. More than once a day?

A. Sometimes more than once a day but they have to do it once a day.

Q. All right. And who attends on that round?

A. That's a purely resident round.

Q. So, how many doctors would there be?

A. There would be all the



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residents, there would be the three residents in
that case, or the four after January, and there
would be probably a nurse with them.

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Q. And does the same process

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that you've described at ward chief's rounds occur
on those daily rounds?

7

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A. That occurs between themselves.

9

There's no staff person with them at that time, and
there's a reason for that.

10

Q. What's the reason for that?

11

A. The reason for that is that

12

they have to have a period when they can do their

13

own assessments and have their own discussion at

14

peer levels without having the breathing down their
shoulder of a staff physician.

15

16

Q. And is that a characteristic
of a teaching hospital?

17

A. Yes, that's a very important

18

ingredient of a teaching hospital.

19

Q. And do I understand that the

20

residents daily rounds may or may not produce a
note in the record?

21

A. Yes.

22

Q. Yes?

23

A. I should add that the residents

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2 round is a round that's sacrosacnt in the position
3 that no physician who is on staff is allowed to
4 interfere with that round in any way. He's not
5 allowed to go and ask about the patient during that
6 round unless it's an absolute dire emergency.

7 Q. Yes. But that I take it
8 means that either once or twice a day there is a
9 round with respect to every patient on the ward in
10 which that team examines the history, condition and
prognosis of the child?

11 A. Yes, and there would be
12 other rounds of the sick patients later in the day.

13 Q. I see. Now, in addition to
14 that, are there daily cardiovascular surgical rounds?

15 A. Yes, there are.

16 Q. All right. Now, will you
17 tell us who's there?

18 A. The daily cardiovascular
19 surgical rounds are done by the cardiovascular
20 surigcal residents and I'm not sure how many would
go around, but presumably two minimum.

21 Q. All right. So, the cardio-
22 vascular surgical patients will be visited daily by
the surgical doctors?

23 A. Yes.
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Q. Are there any cardiologists
who are not surgeons participating in that?

4

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A. No, there would not normally
be. They would do that at rather unusual hours.

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Q. Then in addition to that you
have one, perhaps more residency rounds which would
number three doctors visiting each patient everyday?

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A. Yes.

Q. And then twice weekly you
would have ward chiefs rounds which would attract
at least five doctors?

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A. Yes.

Q. And then I think you called
them ward chiefs cardiological surgical rounds once
a week that might attract 10 doctors?

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Q. And those are the teams that
in the course of a week would visit, examine the
record and make judgments about the condition and
prognosis of the baby?

20

21

22

A. Yes.

Q. Now, one other matter before
I get on to the much promised new subject.

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Mr. Lamek made reference when he was
reading the record of nurses notes from time to time



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to the nurses observation that the condition of the patient was stable and I want you to tell the Commission what a doctor reading that note understands the nurse to be referring to. You will note the preposition hanging at the end.

A. I would believe that most of us at any rate would take from the nurses record that there hadn't been appreciable change in the particular points that she observes during the period of her shift, or that there had been no change during certain parts of that shift. If she said it was stable for three hours or six hours and then something else happened, that prior to something happening she would regard the condition as having not changed in the sense of the signs that she tabulates and follows.

Q. All right. Now, can there be changes in the condition of the patient - perhaps I'm just repeating myself - which the nurse will not observe in a patient who is stable with reference to the signs that she measures.

A. Yes.

Q. What sort of changes and how are they measured?

A. Well, the most important



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changes would be of the nature I've already referred to, changes in the degree of heart failure that might not necessarily be reflected in the vital signs. I mean by that that if you have a baby who is breathing at 30 a minute and a heart rate of 110 a minute and that baby suddenly develops heart failure, then the nurse is going to notice a change because the heart rate will increase and the respiratory rate will increase and she will suspect that something is amiss. She may not be able to diagnose heart failure but she will recognize something.



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On the other hand, if the pulse rate is running at a stable rate of 145 or 150 and the respirations are 60 to 65 and no change in that, there may be changes in the degree of heart failure which those signs would not reflect. Those changes are mainly things that physicians may be able to detect by palpation of the abdomen to feel the liver size and to listen to the heart for gallop rhythm and rales and crepitations and so on.

Q. Well now, you told us about the Hospital record. If one were interested in reviewing the history of a patient leading to his death, say a baby who was in the Hospital for two or three weeks, you would have the record as we have here. If you wanted to get a sense of that baby's history in the two or three weeks it was in the Hospital, who is the person you would want to talk to?

A. Well, you would want to talk to the Ward Chief and probably the cardiac Fellow as well, but the Ward Chief would have the experience and overall perspective of this that would probably be most valuable.

Q. To what extent is his input necessary to amplify the written record?

A. Oh, I think it is necessary.



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I don't know that I can put a figure on that, but it is certainly important to have. If he hasn't written a note on the chart, you really want to speak to him.

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Q. Now, let me come to the cause of death. In this Inquiry, we have asked what is the cause of death with respect to these babies really from two points of view: What was the cause of death as determined shortly after the death? What was the cause of death looking back and taking into account the history of all the deaths?

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Now, I want to deal with the first of those for a moment. I just want to get the process that is involved in assigning a cause of death because I am getting the impression that doctors work differently than lawyers do.

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I take it, from what you said yesterday, that, in the case of any baby dying in the ward, in the case of anybody dying anywhere, the cause is, generally speaking, a stoppage of the contractions of the heart; that is the technical deadend cause?

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A. Yes.

Q. I take it that that isn't what you mean by assigning a cause to the death?

A. No.

Q. What are you looking for?



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A. We are looking at explanations of why the heart slowed or stopped or whatever.

3

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Q. Can we call that the underlying cause for the moment?

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A. Yes.

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Q. When you assign a cause of death, either on a death certificate, or for the purpose of a review, or for the purpose of giving your evidence in this tribunal or elsewhere, is that what you are doing; looking for the underlying cause that gave rise to the stoppage of the heart contractions?

12

A. Yes.

13

14

15

16

Q. I just want to review with you - and I think I can lead you through it because it is undisputed - the raw material that you have. Let's take a case in which you are not the consulting physician.

17

Are you with me so far?

18

A. Yes.

19

20

Q. Now, you would have the Hospital record, with whatever notes it contains?

21

A. Yes.

22

Q. You would have the tests that were performed on the baby?

23

A. Yes.

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Rowe
ex. (Scott)

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Q. And in the case of a catheter, I take it what you get is, in substance, a moving picture of that heart under catheterization?

A. And measurements of physical pressure and oxygen and so on.

Q. You would have X-rays and any lab tests that are done?

A. Yes.

Q. You would have the clinical observations, as they are recorded in the notes, the record?

A. Yes, the physical signs, the nurses' notes.

Q. You would have any history as part of the record given by previous medical advisers?

A. Yes.

Q. You would have the opportunity, I take it, if you were lucky, to speak to doctors, fellows, residents who had actually seen the baby?

A. Yes.

Q. And, as a result of that, you accumulate a body of information?

A. Yes.

Q. Raw material?



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A. Yes.

Q. Now, what do you do next?

A. Well, we examine the principal features of that information.

THE COMMISSIONER: I wonder if I could go back just a moment, doctor.

When a child dies, I take it a death certificate has to be given - I am ignoring autopsies and all the rest of it, but someone, somewhere, has to say what the cause of death is. Who is that?

THE WITNESS: That is usually the Senior Resident.

MR. SCOTT: Mr. Commissioner, I will be coming to how the cause of death is formally assigned.

THE COMMISSIONER: All right.

MR. SCOTT: It varies.

THE COMMISSIONER: The reason I was asking the question was, I want a picture of who is doing this, undertaking this task.

MR. SCOTT: Well, everybody is doing it in this case.

THE COMMISSIONER: We are all doing it, I know.

MR. SCOTT: Including you.



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THE COMMISSIONER: I suppose,
ultimately, I have to do it as well. At the time,
I assume that Dr. Rowe would not be going through
this exercise.

MR. SCOTT: Well, he would and he
wouldn't. The evidence I will be leading - and I
don't think there is any dispute about it - is that
the cause of death is assigned in a series of sort
of escalating reviews.

THE COMMISSIONER: Yes. All right.

MR. SCOTT: The first is the
resident who is there when the baby dies.

THE COMMISSIONER: All right. I am
getting ahead of you. So you do it your way.

MR. SCOTT: Q. I just want to talk,
not now about the process which takes place in any
particular instance; I want to talk about the intel-
lectual process through which you go. You see, lawyers
do something different.

You collect this raw material that
you have described.

A. Right.

Q. And I take it, in the
appropriate case, the autopsy will be part of the
raw material?



G7

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A. Yes.

3

Q. And then you try to make a

4

judgment of some kind?

5

A. Yes.

6

Q. Well, let me give you an

7

example. Let us assume that you have a baby with

8

a structural heart defect - and it is before autopsy -
you think as the catheter reveals.

9

Are you with me so far?

10

A. Yes.

11

Q. You have a baby who has

12

congestion, which we know, from yesterday, is a kind
of respiratory illness; right?

13

A. Yes.

14

Q. And you have a baby who has

15

been on digoxin therapy --

16

A. Yes.

17

Q. -- of normal dosages as far

18

as the record reveals.

19

A. Yes.

20

Q. Now, what is the process by

21

which you exclude any of those? You can't just put

22

down, can you, well, there are a whole lot of things;

23

I can't decide? Don't you have to pick out a cause

24

as being the dominant cause?

25



G8

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A. Well, you try to.

Q. How do you include or
exclude any of those things in my example?

A. Well, you look at each of
those issues, the anatomy of the defect, the severity
of the defect, in other words; you would make a judg-
ment on that basis. Is that defect sufficiently
severe to explain the death of the patient on its own?

Q. Yes.

A. If you found it was a rela-
tively mild defect, you would not put that as a major
contributing cause of the death.

Q. Yes.

A. If it were a very complicated
defect or if the baby had been obviously in severe
heart failure for days and was not making good pro-
gress and so on, you would be much more inclined to
weigh heavily in favour of the death being from that
cause.

As far as the congestion and the
question of rales in the lung, you would look to see
whether or not there was evidence --

Q. There was what?

A. There was evidence to show --

Q. Evidence?



G9

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A. -- evidence to show that there was an infection in the lung; fever, high white count or something of that sort, or --

Q. I'm sorry...

A. -- or whether it was just part of the failure picture and not related to the lungs.

Q. If there was evidence, would you keep it on your list of causes?

A. Oh, yes. Say the baby had severe congenital heart disease and you said, well, that is probably enough to account for the death, but you also had fever and the high white count and rales in the lung; you would be considering that pneumonia would be a component of the cause.

Q. If you have evidence, you keep it on your list?

A. Yes.

Q. If you have no evidence, there is no evidence -- you are looking at congestion but there is no evidence of it, then do you keep that on your list of possibilities?

A. No.

Q. Now then, when you come to digoxin, we know the baby has been on digoxin for a



G10

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month, normal dosages, as the record reveals, and we know digoxin can kill; how do you decide to include it or exclude it as a cause of death?

A. Well, you look to see whether there are any features that would suggest that.

Q. Are you looking for evidence?

A. Yes, I guess you could call it that.

Q. And I take it one of the pieces of evidence you would look at is any serum readings?

A. Yes.

Q. And another piece of evidence might be the physical condition of the baby, although we know from yesterday the problems about that?

A. Yes.

Q. And if there is evidence of digoxin as a cause, do you exclude it?

A. No.

Q. If there is no evidence of digoxin as a cause, do you keep it on your list?

A. No.

Q. Now, when you are looking at the cause of death and you are making up your list and taking items on or putting them off, depending on



G11

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whether there was evidence pointing to one or the other, do you ever consider, as statisticians do, that you have a lot of a certain kind of death in the past six months; therefore, this is probably that kind of death, too?

A. Yes.

Q. You would consider that, would you?

A. Yes.

Q. Would you put that on your list as one of the possibilities?

A. Yes.

Q. How do you assess it then?

A. Perhaps I could have that question again. Would you give me that again?

If there were other cases of the same sort of death...?

Q. Let us assume you have a ward in which - like 4A/4B, in which there are serious cardiac cases and, on Monday, you have three cases where the cause seems to be congestion - that seems to be the dominant cause --

A. Yes.

Q. -- the heart is starved for oxygen and the baby dies --



G12

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2

A. Oh, I see.

3

Q. -- now, the next day, you

4

have another death. I take it from what you say you

5

may want to put on your list of potential causes

6

congestion. How do you decide if congestion remains

7

on that list?

8

A. I am not sure I follow that
question completely, Mr. Scott.

9

Q. Okay.

10

How do you decide if congestion,

11

in that case, is a cause?

12

A. In this baby we are talking
about, this theoretical baby?

13

Q. Yes.

14

A. And you are talking about

15

congestion of the lung or heart failure?

16

Q. Congestion of the lung.

17

A. How do we recognize it as a

18

cause?

19

Q. No. How would you exclude

20

it? You do all this automatically but I think the

21

process is important because lawyers do something

22

different, which we will come to later.

23

Let's take the case I started out
with where you have a structural defect in the heart --

24

25



G13

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A. Yes.

3

Q. -- you have congestion and

4

you have a course of digoxin therapy.

5

Are you with me so far?

6

A. Yes, I am with you.

7

Q. Those are possible causes

on your list?

8

A. Yes.

9

Q. Babies die of all those

10

things.

11

You then have the raw material; all

12

these reports and tests and observations, and you

13

want to find the underlying cause. How do you include

or exclude underlying causes?

14

A. Well, you will take what

15

information is available to you in support or against

16

their contribution.

17

Q. In other words, I take it

18

we know that babies can die because they are shot in

19

the head with bullets.

20

A. Yes.

21

Q. How do you exclude that?

22

A. Because there is no sign of it.

23

Q. There is no sign of it. All

right. Now, in this process, when you are looking at

24

25



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G14

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a cause of death, do you ever, as a matter of pro-
fessional discipline, assign as an underlying cause
something for which there is no evidence?

A. No.



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Q. And when we are talking about evidence, are we talking about the very condition of the child?

A. Yes.

Q. And do you as a matter of professional discipline ignore evidence on the record which may point to a given cause?

A. No. We hope not.

Q. Well now let's come to see how that cause of death judgment works in practice.

First of all I take it that no physician believes that he can determine the cause of death with any certainty or with absolute certainty.

A. No.

Q. You are making a judgment on the balance of probabilities and on the basis of the information at hand?

A. That is right.

Q. All right. Now when a baby dies in 4A or 4B in the daytime or at night, who was the person initially who was responsible for making the preliminary determination of the cause of death?

A. That would be the senior resident and the Cardiac Fellow.



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H2 THE COMMISSIONER: Well, the
Cardiac Fellow is not there I take it. He is not
necessarily there?

THE WITNESS: He would be there
during the day and he will be called if there is
any complication at night.

THE COMMISSIONER: But he will be
called for every death I take it?

THE WITNESS: He will be called
before the death occurs.

THE COMMISSIONER: Unless the death
is so sudden.

THE WITNESS: Yes, but he usually
will be; as you will see on most of the charts he
is there at the time of the arrest.

MR. SCOTT: Q. So you have an arrest,
the baby dies. During the day the senior resident
and the Cardiac Fellow will inevitably be there,
won't they?

A. Yes.

Q. Or in very close range?

A. Yes, and the associate
resident who is the head of the arrest team.

Q. Yes.

A. Unless there is a do not



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resuscitate order.

3

Q. All right. We will leave that

4

out for the moment. If the death occurs at night

5

the record reveals that the resident will be present.

6

A. And the associate resident.

7

Q. And the associate resident?

8

A. Yes.

9

Q. Who is in the charge of the

10

Code 25 team?

11

A. Yes.

12

Q. And the Fellow will be there

13

as the judge notes if he can get there?

14

A. Yes.

15

Q. And I think our records will

16

reveal that he got there on a very substantial number
of cases before actual expiry?

17

A. Yes.

18

Q. And that is expected of him,

19

is it not?

20

A. Yes.

21

Q. If he can? All right now,

22

those three I take it look at the deceased and form
an opinion?

23

A. Yes.

24

Q. And if they give an opinion

25



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that the baby died because the baby's heart stopped,
that isn't going to do the job, is it?

4

A. No.

5

Q. They have to find the under-

6

lying cause and I take it it is their judgment to

7

make a note; it is their responsibility to make a

8

note fixing so far as they can the probable cause of

9

death on the record?

A. Yes.

10

Q. Now at that stage is it usual

11

to prepare a death certificate?

12

A. Usually at that stage they

13

will speak with a responsible cardiologist, the

14

staff cardiologist.

15

Q. And if it is in the daytime

16

he will be there; if it is at nighttime they will

17

get him at home?

A. They will get him on the phone,

18

yes.

19

Q. And what do they discuss

20

with him?

A. They discuss with him the

21

circumstances of the death.

22

Q. Yes.

23

A. They ask questions about any

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H5

concerns or difficulties they may have in arriving at the assignment of the cause and then reach some consensus on what that should be.

Q. All right. So do I have it that in addition to the Fellows and the residents and the resuscitation leader, the cardiologist is consulted in person by day, by telephone at night, to review the circumstances of the death?

A. Yes.

Q. And is it after that that a death certificate is filled in?

A. I think so. I am not exactly sure of the precise timing of the death certificate.

Q. I take it this has to be signed by one of the doctors?

A. Yes.

Q. And one of the doctors who was physically present?

A. Yes.

Q. To view the deceased.

A. To pronounce the death, yes.

Q. I take it at your Hospital it is routine to request a post mortem?

A. Yes.

Q. Do you do that in every case?



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A. We do that in every case. We don't always get approval.

Q. You can only get a post mortem if the next of kin or the parents authorize it in writing?

A. Yes. Or unless - or if the case is a matter for the coroner's jurisdiction.

Q. Well, all right. Now at that moment what is the practice with respect to the coroner? Can any doctor or nurse refer the matter to the Coroner?

A. I believe that is so.

Q. How is that done?

A. It is usually done by the resident or the cardiologist calling the coroner personally.

Q. Now we will come in a moment to the circumstances in which you call the coroner. I just want to leave that aside for one moment and get the chronology.

Now we have also heard that there is a responsible physician so designated for each patient.

A. Yes.

Q. And who is he?



H7

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A. He is the ward chief.

3

Q. The ward chief, and he will

4

have heard about this death?

5

A. Yes.

6

Q. Who will he hear from?

7

A. He will, if he is on duty he

8

will hear from the resident staff or the Fellow. If

9

he is not on duty he will hear at 8:30 in the morning

10

or they may even call him before that.

11

Q. Now following that and

12

assuming a post mortem is to be done, the body is

13

removed to the Pathology Department?

A. Yes.

14

Q. With respect to post mortems

15

when is a post mortem performed if the baby dies at

16

night, assuming consent?

17

A. The next day, or the same day

if it is in the early hours of the morning.

18

Q. All right. So if you die

19

between midnight and 8:00 a.m. the post mortem will

20

be performed that day?

21

A. Yes.

22

Q. If you die during the day,

23

let us say, between 8:00 a.m. and 5:00 p.m., 6:00 p.m.

24

A. It may be done that day or the

25



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next day.

3

Q. I see.

4

A. They try to arrange it to

5

suit the family's needs.

6

Q. I take it post mortems in

7

short are not usually performed at night?

8

A. No.

9

Q. Now who performs the post

mortem?

10

A. The pathologist.

11

Q. And pathology is a separate

12

division or department in the hospital?

13

A. Yes.

14

Q. Has the cardiac team any

15

contact with the Pathology Department and the work
of post mortems?

16

A. Yes. It has a direct link

17

through one of the staff cardiologists who has a

18

joint appointment in the Department of Pediatrics

19

and the Department of Pathology.

20

Q. Who is that?

21

A. That is Dr. Robert Freedom.

22

Q. Yes. Will you tell me how that

works?

23

A. Well ---

24

25



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Q. First of all he is appointed

3

to the Division of Pediatrics?

4

A. Yes.

5

Q. In Cardiology?

6

A. He is appointed to the Division
of Cardiology in the Department of Pediatrics.

7

8

Q. Yes. And he is also appointed
to the Department of Pathology?

9

A. That is correct.

10

Q. And he is a pathologist then?

11

A. He is not officially a
ticketed pathologist, if I may use the words.

12

13

Q. Well ---

14

A. But he is a person with
enormous experience in gross description of - the
description of gross form of heart malformations.

15

16

Q. Are you referring to the fact
that he may not by law be permitted to sign a
pathologist's report?

17

18

A. That is right.

19

20

Q. All right. What function
does he perform in the case of a baby who has died
on the cardiac ward and who has gone to post mortem?

21

22

A. Well, he is the person who
makes the description of the cardiac malformation in

23

24

25



1
2 its gross form. That is in its form without looking
3 at it under microscope so he makes ---

4 Q. He makes the what?

5 A. He makes the description of
6 the defect arrangements in the heart in its gross
7 form. Meaning that he does not do an examination
8 under microscope. He simple takes a look at the
9 specimen, of the heart, and describes it in terms of
10 its deformities.

11 Q. Does he perform the surgical
12 work in connection with pathology of the heart from
13 time to time?

14 A. Surgical work?

15 Q. Yes. That may be a misnomer.
16 I didn't want to use the ---

17 A. No, I think he acts as a
18 consultant really in this capacity. He has a
19 pathologist generally do the incisions and so on.

20 Q. To what extent therefore is
21 he reviewing the hearts at post mortem of patients
22 who die in the cardiology wards?

23 A. Oh, to a very large extent.
24 I think the only cases he would not see are probably
25 those when he is away and where the hearts have to be
placed back in the body before the body can be released



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not
and so he might/see the specimen if he is away or at
a meeting or on vacation or somewhere.

4

Q. I see.

5

6

A. I don't know what the
percentage would be but maybe 90 per cent or plus.

7

8

Q. If the heart doesn't have to
be put back is it sometimes preserved?

9

A. If approved it can be done.
That is frequently done.

10

11

Q. That requires the consent of
the family as well?

12

A. Yes.

13

14

Q. And therefore I take it that
he not only consults to the pathologist but he sees?

15

A. Yes.

16

17

Q. Now are you are aware of
any other hospital that has this contact point
between postmortem pathology and cardiology?

18

19

20

21

A. I don't believe I know of
a place that does that. I have spent a good deal of
my professional life striving to get that arrangement
going but this is the only place where I have
succeeded in doing it.

22

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Q. Why in your opinion is it
important?

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A. Well, I think it is important to have somebody who knows the clinical and investigative side of the heart malformation who has the experience of having participated in and observed and reviewed the angiographic material which is the anatomic detail review at cardiac catheterization and who has a lot of experience with just heart defects themselves.

It is important to have that sort of individual working together with a pathologist. I think that produces the optimum benefit in terms of the final analysis of the patient's condition and for the educational purposes of all concerned.

Q. Why is the autopsy important to a cardiac ward?

A. To simply make sure that the malformation of structure was as predicted during life.

Q. I take it from time to time it may point to malformations of which you are not aware?

A. Yes.

Q. And it may point to other causes of death which you were not aware or did not consider?



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A. Of course.

3

Q. Now we had reference to the

4

morning meeting and I want you to tell the Commission

5

about the meeting that is held every morning on the

6

cardiac ward beginning at 8:30.

7

First of all, who attends that?

8

A. That meeting is attended by

9

the staff of the Cardiology Division. The cardiolo-
gists themselves. The Fellows in Cardiology.

10

Residents in Pediatrics who are attached to the ward.

11

Any postgraduate students who are with us for the

12

period of time. Frequently a surgeon ---

13

THE COMMISSIONER: Sorry, you will

14

have to help me out. Postgraduate students, would

15

they not be interns?

16

THE WITNESS: No, they may be

17

residents from another hospital, another university

18

centre, or they may be from the United States or

19

they may be from England or ---

20

MR. SCOTT: Q. Simply assigned

to work with you.

21

A. They have arranged to come

22

on an elective basis to work with us.

23

THE COMMISSIONER: All right. Well, I

24

stopped listening at postgraduate students. Who did

25



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you say after that?

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THE WITNESS: I am not sure where I
got to now.

5

6

MR. SCOTT: Q. I think you dealt
with all the medical people.

7

8

A. Then cardiovascular surgical
residents frequently are there.

9

10

11

12

There are some technicians from the
Division, especially those who work in the field of
ultrasound because it is important for them to view
the ultrasound tapes that we show at that meeting.
And then there will be some nurses from the ward.

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Q. And would it be fair to say, I had the privilege of going to one, that there would be anywhere from 20 to 30 people in this room?

A. Yes.

Q. And how often does that conference take place?

A. It takes place every day from Monday to Friday.

Q. Yes.

A. And it is regarded within the Division as a very important conference so that I would expect everybody to be there who can be there unless they are mortally ill themselves or unless they are on vacation.

Q. Now, would you just give us the headings of the matters that are discussed and reviewed at that daily morning conference.

A. Well, it is in essence a work conference. So, it deals with management of patients. It starts by reviewing the cardiac catheter material from patients that have been studied the day before or, in the case of the weekend, the Friday, Saturday and Sunday period --

Q. So, if I can stop you there, does it deal with patients who are going to be



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catheterized?

A. It deals with patients who have had studies performed and presents the results.

Q. And that's done not only orally but visually with reference to the films?

A. Yes.

Q. The lights go out and everybody looks at these?

A. Yes.

Q. Okay. So, you deal with the catheterization cases. Just briefly, what's the purpose of doing that?

A. Well, the purpose of doing that is that it gives an opportunity for further input into management decisions by people who did not participate necessarily in the studies.

Q. All right. So, when the catheter study of Baby X is being reviewed, who will run that part of the meeting?

A. Well, that will be done by the person who did the catheterization but the ward chief or the responsible physician involved would have input into the commentary that followed.

Q. And in commentary that follows, does everybody participate?



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A. They can if they want to and they've not been known to be reticent about that.

4

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Q. Well, do they participate in fact, and I'm talking about technicians and nurses as well as doctors?

7

8

9

A. Well, technicians and nurses may not but they may respond to a specific question or they may interject but not very often.

10

11

Q. And is the opinion of others invited as to the diagnosis or prognosis?

12

13

14

A. That's taken for granted.

Q. Yes. Well, when you say it's taken for granted, what do you mean, it isn't formally invited?

15

16

A. Well, we encourage it.

17

18

19

Q. All right.

A. In fact, we ask the resident staff, the cardiac fellows, what would you do with this situation in terms of management and then they have to come up with an answer.

20

21

Q. All right. Now, what else is discussed besides the catheter cases?

22

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A. Then the patients that are about to be studied that day are then presented.

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Q. In the same way?



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A. In the same way except that there is a decision then made as to how the study will be organized. That will have been decided by the person doing the study or planning to do the study but he will be waiting to hear if there are other views about the way the study might be adjusted or changed. So, that's the purpose of bringing those cases up.

Q. Do they change their mind from time to time or are they like lawyers, they just want it confirmed?

A. It's been known to happen, yes.

Q. Well, what happens next, when you've dealt with that kind of case that comes up before the morning conference?

A. Then we have a presentation if there have been deaths.

Q. Well now, that's what I want to get at. If there's been a death the night or the day before, will you tell the Commission how it is dealt with at this morning conference. Just before we get to that, I take it from what you've already said the ward chief, the physician responsible, the resident and the head of the resuscitation team, if one came in, will have already reviewed the death for the purposes of assigning a cause?



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A. Yes.

Q. All right. Now, it comes to morning conference, how is it presented at morning conference?

A. Well, it's presented by the fellow in cardiology who was involved.

Q. And will he review the case?

A. Yes.

Q. Will he review the history?

A. Yes, briefly. He doesn't go into enormous detail but he gives enough that people who don't know anything about the child will be able to follow what he's talking about.

Q. Yes. And does he discuss, if appropriate, studies or observations?

A. Oh yes.

Q. Or any other matters that are available to him?

A. Yes.

Q. Is he expected to get up this file to present it at morning conference?

A. Yes.

Q. All right. Now, after he's made his presentation, what happens?

A. Well then, there is commentary



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from the staff and from others.

Q. And is the commentary, does the commentary include analysis of the cause of death?

A. Yes.

Q. Yes. Does it include analysis of the management of the patient prior to death?

A. Oh, yes.

Q. Does it include anything else I may have overlooked?

A. No, those are the main things.

Q. Is there any process whereby a concensus as to the cause of death is formulated?

A. Usually. If there is not, of course, the matter may be resolved by post.mortem, results of which may or may not be presented at the same time.

Q. All right. Now, if the baby died at night, the baby's death will be dealt with at that morning conference the succeeding day?

A. Yes.

Q. If a postmortem is to be performed, the post mortem will not be available for that morning conference?

A. That's correct.

Q. Does that mean that the baby's



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death will be discussed again at the following
morning conference?

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A. Usually.

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Q. Yes. When the post mortem is
available?

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A. When the information is
returned by Dr. Freedom, yes.

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Q. Now, for that second meeting,
I take it from what we've seen, it doesn't follow
that the written report has been received?

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A. No.

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Q. But will someone have obtained
orally the results of the post mortem?

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A. Yes.

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Q. If there is any delay in doing
that, what is done? Is the matter simply put down to
the succeeding morning conference?

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A. Yes, if there is any delay for
one reason or another, such as, say, Dr. Freedom is
away on vacation, then it will wait until he comes
back.

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Q. All right. Now, if the case
has been directed by one of the people present at the
moment of death to the coroner, is that fact brought
to the attention of the morning conference?



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A. Yes.

Q. Does that fact lead to a postponement of the discussion or do you just go ahead and discuss it, even though the coroner may be coming in?

A. Well, we discuss it but we realize we may not be able to get the answer to that for some time.

Q. All right. Does the morning conference ever discuss whether, because of uncertainty, a matter should be referred to the coroner?

A. That has happened, yes.

Q. Yes. Now, in the case of a baby who has been on the ward for, let us say, two weeks and unfortunately dies, are the persons who are at this morning conference when that baby's death is discussed strangers to that baby?

A. Not everybody.

Q. No, but I take it that the doctors who are there at the morning conference after the baby dies, will they have been the doctors who will have seen the baby twice a week at grand rounds, third time at surgical rounds, if they're fellows or residents, twice a day at residents' rounds, to touch, feel, probe, assess?



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A. Yes, and also, in most babies with that situation, the investigations will have been previously put before that meeting.

Q. Well, is it fair to say then, Doctor, just to clear it up, any doctor on the cardiological team who is present at the morning conference, in the case of a baby who has died after being there two weeks, that that doctor will have seen this baby many times?

A. May have.

Q. Yes. And you were also going on to say any previous procedures or management questions about that baby, would they have been raised at earlier morning conferences?

A. Almost certainly because it would be unlikely for anybody to be in the hospital for two weeks without having had material presented about their investigations.

Q. So, if a baby goes in to have a catheter and then surgery and then dies, I take it, the baby will be discussed at morning conference before catheterization?

A. Yes.

Q. After catheterization?

A. Yes.



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Q. Before surgery?

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A. Yes.

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Q. After surgery?

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A. Yes.

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Q. And then after death?

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A. Yes.

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THE COMMISSIONER: I'm sorry, after surgery?

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THE WITNESS: Yes, because we have a surgical conference once a week.

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THE COMMISSIONER: Oh, yes, that answers the question.

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Q. Now, in the course of the morning conference when the death of the baby has been analysed, are there ever suggestions made that a review or an examination or research should be done on a specific issue or cause?

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A. Yes.

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Q. That one doctor thinks has been overlooked?

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A. Well, there are often discussions about unusual types of heart disease or unusual course in which it will be suggested that somebody might review the experience that we have had in that particular situation. Dr. Freedom is always



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suggesting things like that.

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Q. I beg your pardon?

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A. Dr. Freedom is always

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suggesting things like that.

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Q. All right. Well now, apart

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from the morning conference, is there a conference

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called the weekly pathology review?

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A. Yes, there is.

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Q. And does that consider the
death of babies?

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A. The weekly cardiac pathology

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review?

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Q. No, we'll come to the cardiac

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pathology conference in a minute, I want to talk about

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the weekly pathology review.

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A. Conducted by the department of

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pathology?

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Q. Yes.

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A. Yes.

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Q. Are you aware of that review?

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A. Yes, I am.

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Q. Yes. And I take it that they
review the pathology of babies who died in cardiology?

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A. Yes, it's an internal review

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structure that they don't have other people coming in.

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Q. But that is done by the pathology section?

A. Yes.

Q. And insofar as babies die, dying in cardiology and go to autopsy, your babies will be reviewed by this weekly pathology review committee?

A. I believe so.

Q. Yes. And you have no input to that committee?

A. No.

Q. In the sense that you cannot go there and insert your own opinion?

A. We have not been invited to do so.

Q. It's independent of you?

A. Yes, it really is.

Q. And it reviews causality in the cases of your deaths?

A. I presume so.

Q. Do you ever get any feedback from it?

A. I haven't personally had any from that.

Q. Who's the contact?



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A. What contact do we have with
them?

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Q. Yes.

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A. None.

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Q. All right.

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A. We just know that it exists.

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Q. Yes. And it reviews your
deaths?

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A. It reviews all deaths that
have had autopsy.

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Q. What percentage of the deaths
are cardiology deaths?

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A. About a quarter, I believe.

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Q. Yes. Is there a virtue --
would you prefer it to be independent or connected
with the cardiology department?

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A. I think there's a value to
having a completely separate review by pathology.
I think that in autopsy reviews of cardiac patients
it's also important to have a pathologist's input.
But I think there is advantage to an independent
review by the pathologists on their own without any
input from us at all.

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Q. All right. Now, in addition
to that, is there from time to time a cardiac

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pathology conference?

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A. Yes.

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Q. And who goes to that?

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A. The cardiac pathology conference

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is attended by, I would suppose, about 35 to 40 people.

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It is in the department of pathology.

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Q. Do they run it?

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A. It is run by a pathologist,

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a cardiac pathologist from the department of pathology
and by Dr. Freedom.

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Q. So, it's the pathologists'

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conference but you can go to it?

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A. Well, it is specifically

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designed for the divisions of surgery, cardiovascular
surgery and pediatric cardiology.

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Q. Now, I take it that that meets

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with some regularity but at a call of the chairman
primarily?

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A. Yes.

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Q. Yes. And just so we'll have it

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that there were four such cardiac pathology conferences
in 1980?

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A. As far as I know.

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Q. Yes. Is it regarded as a

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review process or as an educational process?

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A. Well, it's principally an educational process.

Q. What is its purpose?

A. Its purpose is to instruct on the specific anatomical disorders of the heart and it has impact not only for pathologists and cardiologists but for the cardiovascular surgeons and their staffs both in the operating room and elsewhere because their patients condition and anatomy is dealt with in extreme depths. It's a very, very complete sort of a presentation.

Q. Are you familiar with the surgical pathology conference?

A. Yes.

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Q. And what is that conference?

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A. The Surgical/Pathology

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Conference, the one that I am aware of, is one held

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by the Surgical Division, Cardiovascular/Surgical

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Division, in the Hospital, the surgeons involved and
their residents.

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Q. Are the cardiologists outside

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of that, is it independent in the sense that the

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weekly pathology review is independent?

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A. Yes.

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Q. But is it considering

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cardiac patients --

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A. Yes.

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Q. -- who are within your

jurisdiction?

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A. Yes. I should say that

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that conference is of relatively recent origin, for

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three or four years perhaps, and prior to that time,

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surgical mortality was reviewed at the Cardiac/

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Pathology conferences.

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Q. During the epidemic period,

did the Surgical/Pathology conference exist?

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A. Yes, it did.

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Q. Now, you have told us about

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when these meet and you have told us about your

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meetings with the Cardiac/Pathology conferences in 1980. What I want to get at is this: During the epidemic period with which we are concerned, is there any suggestion of which you are aware, or any information that you have, that the various rounds and reviews by doctors, nurses, surgeons that you have described this morning were not conducted or the tradition of doing that was not honoured and fulfilled?

A. In one area, I think we didn't have as many conferences as we normally have; that is the Cardiac/Pathology conferences.

Q. Yes.

Before we get to the conferences, I want to talk about the rounds.

A. No.

Q. Is what you have described today, these rounds by doctors, did that occur throughout the epidemic period in your wards?

A. Yes.

Q. Now, leaving aside the Cardiac/Pathology conference for the moment, did the morning conferences occur just as you have described them, every working day during the epidemic period?

A. Yes, they did.

Q. Leaving aside the Cardiac/Pathology conferences, did the other independent



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reviews, the weekly Pathology reviews, the Surgical/
Pathology reviews and so on, occur throughout the
epidemic period?

A. Yes.

Q. Now, you said you had a
reservation about the Cardiac/Pathology conference.

What do you have to say about that?

A. Well, those conferences
were, on average, about thirty a year from 1974 on,
and that is what they are now. But in that particular
period, they were reduced because of circumstances
that were particular to that time with the staffing.

THE COMMISSIONER: Which one is
this? The Cardiac...?

THE WITNESS: The Cardiac/Pathology
conference. This is a joint conference by Dr.
Freedom and by cardiac pathologists.

MR. SCOTT: Q. What were the
staffing circumstances that led to a reduction of their
number?

A. Well, the cardiac pathologist
who had been formally doing this with Dr. Freedom left
the Hospital employment, and it was in a period of
developing the position for a new pathologist and
acquiring such an individual that the gap occurred.



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Dr. Freedom was also involved, because of the fact he didn't have another pathologist, on a miniSabbatical of his own in terms of a pathology angiographic text that he was writing, so that the circumstances combined to reduce that particular conference numbers.

Q. Now, in addition to the rounds during life and the reviews post mortem that you have described, you have already told us that, from the moment a patient dies, any person, as you understand it, is entitled to notify the Coroner; that the Coroner may be interested in the death.

A. Yes.

Q. Now, how is that normally done, initially?

A. That is usually done by the cardiac Fellow in conjunction with his discussions with the Resident and Associate Resident, speaking to the staff cardiologist of record; that is, the person who is responsible for the patient, and making a decision as to whether or not the Coroner should be notified. So, it is usually a joint decision.

Q. Then, if he decides the Coroner should be notified, how is that done?

A. That is done by a physician ringing the Coroner. Now, it might be the Fellow, it



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ex. (Scott)

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might be -- it is usually the Fellow or the cardio-
logist who does that, but it might be an Associate
Resident or someone else who does it.

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Q. And when he gets the
Coroner on the other end of the line, what does he do?

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A. I'm not sure exactly what he
does, because I have never done it.

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Q. Let me ask you this: Is
the Coroner, at that stage, free to accept or reject
the reference to him?

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A. Yes, he is.

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Q. And are there cases of which
you are aware in which the Coroner, having heard a
description of the death, in effect decides it is not
a matter that should be investigated by him?

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A. Yes, that is a choice that
he will make, based on the information that he is
provided.

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Q. I note, for example, that the
very first death in the epidemic period, which occurred
on June 30, 1980, was reported to the Coroner on
June 30, 1980.

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A. Yes.

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Q. Do you know who made that
report to the Coroner?

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A. Well, I made the decision that that should be reported.

Q. That is the Woodcock death?

A. Yes.

Q. Do you know whether the Coroner accepted that reference?

A. I believe he did.

THE COMMISSIONER: What is that?

THE WITNESS: I believe he did, yes.

MR. SCOTT: Q. You made the decision, but you didn't make the phone call?

A. No. The phone call was made by the Fellow, I believe.

Q. Now, will you tell the Commissioner what you believe to be the appropriate circumstances in which the Coroner should be notified, and you won't get any help from the Act here, doctor, because it isn't very helpful. What do you think are the circumstances in which you should notify the Coroner, or your doctors or nurses should notify the Coroner?

A. Well, as you know, this has traditionally been an area where there is a considerable difference of opinion and interpretation of the conditions under which it should be done.



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Q. Yes.

A. And some physicians tend to err on the side of calling the Coroner perhaps more frequently than he would want.

Q. That he, the Coroner, would want?

A. Well, maybe not that he would want, but that he would expect - let's put it that way.

Q. Yes.

A. In other words, there is a low threshold for calling the Coroner in some situations or by some physicians. Others are much more reluctant to call the Coroner, unless they have some very specific incident.

I think that, in general, in the cardiology area, it has traditionally been the case to call the Coroner if a patient from the ward dies in the operating room.

Q. So, first of all, if a cardiac patient dies in the operating room --

A. That's right.

Q. -- you don't make a judgment; you notify the Coroner?

A. That is generally done. Now,



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we don't do the notification; that is done by the Surgical service, but that is what we usually do.

Q. What about if one of your patients dies in ICU?

A. If the patient dies in the Intensive Care Unit, then the responsible physician in the Intensive Care Unit makes that decision. It would depend on many circumstances and on individual opinions as to whether he would be notified.

As I have said, some might have a lower threshold than others on this point.

If I had a patient on the ward who had gone to the cardiac catheterization lab and developed a complication in the laboratory and was transferred to the Intensive Care Unit, or who died in the laboratory, or who died in the Intensive Care Unit, we would regard that as an indication to call the Coroner.

Q. So, if a ward patient of yours dies in ICU or in the lab, irrespective of what the ICU or the lab people do, you may notify the Coroner yourselves?

A. Well, we would perhaps work a little more diplomatically than that. We would perhaps talk to the Intensivists and persuade them to



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do this that way, but we would work in that general direction.

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Q. What about other ward patients who die?

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A. Well, if patients are, in our view, suffering from an illness which we would regard death is inevitable, or where there was very high-risk evidence of the patient dying, we would not normally notify the Coroner.

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Q. What cases are left in which you would notify the Coroner?

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A. Well, that would be a patient in whom we perhaps had not expected the death at that particular moment. I recognize that we have been through the term "unexpected" many times in this setting with different meanings to it, but I think a good example is the baby you mentioned, Woodcock.

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Q. That is the first baby in the group.

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A. That is the first baby in the group who had a minor malformation of the heart, who was jaundiced and who, therefore, had a number of medical reasons why there might have been death but they were not sufficiently well explained, in my view, that the matter should not go to the Coroner. So, it

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went to the Coroner.

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Q. In the Woodcock case, before you sent it to the Coroner, were you able to make a judgment on the balance of probabilities as to the cause of death?

A. We thought the cause of death might be due to a viral infection in this child, but we were wrong.

Q. And you sent it to the Coroner, why, because you had some doubt about your judgment?

A. Because I was not sure what the reason was.

Q. Now, are there other circumstances? How about cases in which there are issues about the treatment of the patient?

A. Yes. Anybody who dies unexpectedly during the treatment - and a good example of that would be the Baby Velasquez in this series --

Q. Yes.

A. -- who died during the injection of a therapeutic agent.

Q. Why did you send that case to the Coroner?



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A. Well, because that was not an expected event.

Q. Are there any others?

A. It is really when there is a major discrepancy between what you expect on the basis of the information in front of you about the baby's condition and what happens to the baby. A baby like Baby Perreault, who I think is the second baby in the series, is a baby whose death we would not report to the Coroner because that was an inevitable death and it didn't matter what time that baby died; we would not be concerned that that was a matter for the Coroner's concern.

Q. I know we will come back to it but, in July and August, you sent, within 24 hours, three deaths to the Coroner; the case of the Baby Woodcock, the case of Baby Dawson - do you remember that case?

A. Yes.

Q. And the case of Baby Velasquez, which you have dealt with.

A. Yes.

Q. Do you remember why Dawson would have been sent to the Coroner?

A. I am not sure of the precise



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reason why that baby was. I think, in discussing that case before, I, myself, said that I thought this would be a very questionable referral to the Coroner.

Q. All right.

A. But I think it was the judgment of the physician concerned that this would be an appropriate thing to do.

Q. Now, let's deal with the situation where the Coroner is notified and he elects to accept the case. That is, in the telephone call, he says, all right, I will take it up. Now, what happens next?

A. Then, I believe, usually he comes in, and I say I believe because I am not very involved in this.

Q. Yes.

A. I believe he comes in to look at the information in the hospital record.

Q. Yes.

A. And I think he also talks to the Resident involved.

Q. Yes.

Is he free to talk to any cardiologist or Fellow that he wishes to talk to?

A. Yes, indeed.



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Q. Does he make a decision as to whether he wants a post mortem?

A. Well, yes. He does make that decision. In many cases, permission for autopsy will already have been obtained.

Q. So, in some cases, by the time the Coroner arrives, a post mortem, done by consent of the parents, may have taken place?

A. Or be about to take place, yes.

Q. If it hasn't, what can the Coroner do, as you understand it?

A. He can order an autopsy.

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Q. Who does he order to do it?

A. I am not exactly sure, but
he orders a pathologist to do it and it is ---

THE COMMISSIONER: There is no
difference between the term post mortem and autopsy
I take it?

THE WITNESS: No. No,
Mr. Commissioner.

MR. SCOTT: That is probably my
fault.

THE COMMISSIONER: We started to
use post mortem when we got the coroner's and used
autopsy when we were doing it ourselves. But there
is no significance in that?

THE WITNESS: There is no signifi-
cance.

MR. SCOTT: Q. Are you aware,
Dr. Rowe, of any difference between a post mortem
ordered by the coroner done under the auspices of
the hospital and a post mortem ordered by the coroner
done under the coroner's office's own auspices?

A. No.

Q. If you are unaware of that
you are simply to tell me and I will either simply
forget about it or deal with it in some other way.



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A. No, I am not sure.

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Q. Then I take it in the end

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the coroner fills out the death certificate or makes

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his report?

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A. Yes.

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MR. SCOTT: Now it is five minutes

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early, Mr. Commissioner, but I want to turn to another

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subject and I am not ready to deal with it.

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THE COMMISSIONER: All right. We

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will take an hour and 35 minutes and you can deal

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with it. So it will be 2:30.

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---Luncheon recess.

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--- on resuming at 2:30 p.m.

THE COMMISSIONER: Yes, Mr. Scott.

MR. SCOTT: Mr. Strathy had something he wanted to raise first. We are all getting to know each other so you can imagine what it was.

He seems to have stepped out for a minute. Do you want me to call him or just go ahead?

THE COMMISSIONER: Well, if you don't mind being interrupted.

MR. SCOTT: No. It is not the first time.

THE COMMISSIONER: It is not to enjoin you from any further examination?

MR. SCOTT: No, no.

MR. LAMEK: Here is Mr. Strathy.

THE COMMISSIONER: Here he is now.

MR. STRATHY: Mr. Commissioner, I don't know what occurred in my absence and I am sorry for being late.

This arises out of a letter that I delivered to Mr. Ortved today and a copy to Mr. Scott, and perhaps my letter should have been directed to Mr. Scott rather than to Mr. Ortved. But in any event in it I have indicated to Mr. Ortved that there are certain matters which I wish to raise on the cross-



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2 examination of Dr. Rowe that might require Dr. Rowe
3 to bring with him to the hearing certain perhaps
4 demonstrative evidence, and I am specifically refer-
5 ring to digoxin ampules that were used in the Hospital
6 at the relevant times, a sample of the digoxin
7 pediatric elixir that was in use in Wards 4A and 4B
8 at the time; samples of digoxin tablets, specimens
9 of the various syringes in use in the pediatric
10 Wards 4A/4B in 1980 and 1981; a list of the 4A/4B
11 crashcart contents, July 1980 to March 1981. Samples
12 of the medications contained on the crashcarts during
the same period and specimen IV intravenous apparatus.

13 I have indicated to Mr. Ortved that
14 the reason I am asking for that material is for the
15 purpose of cross-examination on two specific subjects:
16 Number one, the procedures employed at the Hospital
17 with respect to the administration of digoxin at the
18 material times; and number two, the procedures that
were used at the time of a Code 25 or cardiac arrest.

19 Now you may recall, Mr. Commissioner,
20 that at the preliminary inquiry many of the materials
21 that I have asked for were introduced as exhibits,
22 but reading the record or at least the materials
23 produced by Commission Counsel, it is apparent that
24 after the completion of the preliminary those things
25



AA3

1
2 were destroyed.

3 The documents, of course, were
4 made part of the record and are part of the record
5 before you, but the digoxin ampules, the IV apparatus,
6 the elixir and so forth, having no further use,
7 were destroyed and are not available.

8 THE COMMISSIONER: Well, they were
9 only samples in any event?

10 MR. STRATHY: They were samples and
11 there was nothing sinister about them being destroyed.

12 THE COMMISSIONER: No.

13 MR. STRATHY: It is just that they
14 are not available to us here.

15 It would seem to me, sir, it would
16 assist you in understanding the evidence, both the
17 evidence we have heard to date and some that is to
18 come, if we could have these things available for
19 demonstration and examination from time to time, and
20 they would certainly assist me in my cross-examination
21 of Dr. Rowe and perhaps witnesses down the line.

22 Now I think Mr. Scott is concerned
23 perhaps for two reasons: One is that he feels that it
24 is additional work for the Hospital, and I sympathize
25 with that. I have no wish to burden the Hospital any
more than it already is being burdened. And I think



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also perhaps Mr. Scott feels and I think Mr. Ortved shares his concern, these are things that perhaps Dr. Rowe himself might not necessarily know where to put his hands on, and that may well be.

It simply seems to me that these are things I would have thought a hospital without a great deal of difficulty can put its hands on.

I have asked Mr. Ortved and Mr. Scott in I think a reasonably and relatively timely fashion that these be made available, and if it requires a direction from you, sir, that they be produced I would appreciate a direction to that effect.

THE COMMISSIONER: Yes.

Mr. Ortved?

MR. ORTVED: Mr. Commissioner, I am not trying to be difficult, but as Mr. Strathy has indicated his purpose for wishing these items is to cross-examine Dr. Rowe firstly on procedures for the administration of digoxin.

Well, as you have heard from the evidence, he has nothing to do with the administration of digoxin. That is a nursing function.

THE COMMISSIONER: Yes.

MR. ORTVED: And it is also --

THE COMMISSIONER: If it is purely



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a question of time presumably they could be produced
with some other witness because there are so many
more witnesses that are going to be produced.

5

MR. ORTVED: My comment to Mr.

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Strathy is simply it ought to come through a nursing
witness who would be a witness who would have knowledge
of these things, none of which in my respectful sub-
mission to you, Mr. Commissioner, Dr. Rowe has
knowledge of.

9

10

THE COMMISSIONER: Well, he must have

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some knowledge of them I would think, but whether he
would have the best knowledge...

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13

What other witnesses are you planning
that might be more appropriate than Dr. Rowe?

14

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MR. LAMEK: Well, Mr. Commissioner,

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I wouldn't expect to reach any nursing witnesses for
some considerable time yet.

17

THE COMMISSIONER: No.

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MR. LAMEK: Perhaps not until all

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the medical witnesses have given evidence. And to

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that extent there may be substance in what Mr.

21

Strathy says.

22

Now if the evidence should get into

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the area of possible means of administration of
digoxin to any of these children in improper quantities,

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2 then that may be a matter upon which the doctors may
3 have an opinion and they may want to express and
4 perhaps to have material available for demonstration
5 purposes or illustrative purposes might be useful.

6 I don't oppose Mr. Strathy's request
7 at this stage.

8 THE COMMISSIONER: No.

9 Who is your next witness?

10 MR. LAMEK: Dr. Freedom.

11 THE COMMISSIONER: Yes. Would
12 Dr. Freedom be more familiar, do you think, than Dr.
13 Rowe?

14 MR. LAMEK: I think perhaps Dr.
15 Rowe or counsel for the Hospital could tell us that.
16 I can't tell you that, sir.

17 THE COMMISSIONER: Well, if it is
18 just that you prefer not to have Dr. Rowe questioned
19 on this matter I might have some sympathy, but I would
20 rather -- I think that Mr. Strathy is entitled to
21 have them produced before the nursing witnesses come
22 on because for all we know the first nursing witnesses
23 may be his client.

24 MR. SCOTT: Mr. Commissioner, if I
25 could respond. I don't take the objection that Mr.
Ortved does that the present witness is not the



1
2 appropriate witness.

3 THE COMMISSIONER: No.

4 MR. SCOTT: I have nothing to say
5 about that. This request and Mr. Strathy's manner
6 is so polite and considerate and gentle that one
7 falls to agree with it as quickly as possible, but it
8 is the tip of the iceberg.

9 I have received now requests from
10 counsel for the nurses and various other counsel.
11 Counsel for the nurses are asking us to produce all
12 the turnaround sheets for a four-year period, copies
13 of Ward 4A/4B WN Sheets for a three-year period;
14 copies of the annual budgets of the Hospital --

15 THE COMMISSIONER: They would have
16 to justify that.

17 MR. SCOTT: What I am saying to you,
18 sir, is that there is falling upon the Hospital
19 a series of requests to produce material to counsel
20 for the various parties so that it will be available
21 here to be put to a witness presumably.

22 Now this I suppose theoretically
23 can be done. Our posture has been that we will make
24 available to Mr. Lamek everything that he requests,
25 notwithstanding that it is much more difficult to
accede to him than it is to Mr. Strathy. But that's



1
2 the first thing. And we will of course respond to
3 every order that you make.

4 But when we get requests of this
5 type, and they are coming in at some pace, either
6 there would have to be rulings made about each of
7 them or we will just have to wait until we get to
8 the stage of the hearing to --

9 THE COMMISSIONER: Well, would not
10 the apparatus for the administration of digoxin
11 conceivably be relevant to this inquiry?

12 MR. SCOTT: Well, of course, but
13 let's take an example. He wants two or more digoxin
14 pills of the type that were utilized during the
15 epidemic period.

16 THE COMMISSIONER: Yes.

17 MR. SCOTT: Now that is a superficial
18 request that I would be happy to answer if it were
19 simply a question of going to some pharmacy and saying,
20 give me two pills. It is not that simple.

21 We have to be certain because Dr.
22 Rowe I suspect wouldn't recognize them per se. We
23 have to be certain that these are made by the
24 appropriate manufacturer, these are the ones that were
25 used.

Now if the Commission wants those



1
2 two pills --

3 THE COMMISSIONER: Frankly, it
4 won't make any difference to me whether those were
5 the type that were used or not as long as they have
6 the same effect, the same general effect and the
7 same general shape, I suppose.

8 MR. SCOTT: You might be concerned
9 to know whether they are the same dosage.

10 THE COMMISSIONER: Yes.

11 MR. PERCIVAL: Mr. Commissioner, I
12 might satisfy my friend's problems. The police have
13 locked up the tablets, the elixir and anything along
14 the lines that Mr. Strathy wants.

15 THE COMMISSIONER: You wrote the
16 wrong party obviously.

17 MR. PERCIVAL: I didn't get a copy
18 of the letter but that is available.

19 MR. SCOTT: Fine.

20 THE COMMISSIONER: If it is available --

21 MR. SCOTT: That would be excellent.
22 Those were seized by the police?

23 MR. PERCIVAL: Just the drugs. The
24 drugs were seized by the police.

25 THE COMMISSIONER: The drugs them-
selves. That will pretty well, though, solve the



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first half.

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MR. PERCIVAL: As far as the
elixir, the ampules, the tablets I can help you, Mr.
Commissioner, in relation to having that available.

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MR. LAMEK: Mr. Commissioner, that
comes as something of a surprise to me because I
requested those very things from the police at an
early stage and was told they were no longer available.
I didn't know --

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11

12

MR. SCOTT: Let me duck!

THE COMMISSIONER: If we just could
keep this thing going along.

13

14

MR. PERCIVAL: My friend asked for
the actual exhibits, and of course they had been
destroyed.

15

16

17

MR. LAMEK: You have got additional --

MR. PERCIVAL: Oh, yes. These are
additional, yes.

18

19

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MR. LAMEK: Terrific.

MR. PERCIVAL: We could have them
available tomorrow morning.

21

22

THE COMMISSIONER: All right. That
solves half of your problem. Now lets see what
remains.

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MR. STRATHY: Well, that takes us
a good way I think. The other area that I was con-



1
2 cerned about was the crashcart contents as of July
3 1980 to March 1981.

4 THE COMMISSIONER: How big is this
5 crashcart?

6 MR. STRATHY: There are photographs
7 of it. I have asked my friend, Miss Cronk, to bring
8 us some of the photographs.

9 THE COMMISSIONER: If it is a crash-
10 cart, I take it a cart is --

11 MR. STRATHY: It is wheeled into
12 the room at the time of the arrest.

13 THE COMMISSIONER: Yes.

14 Would it be too much to ask a crash-
15 cart be brought in just in a form in which --

16 MR. SCOTT: Certainly. Which ward
17 do you want to do without one?

18 THE COMMISSIONER: I don't know.
19 Have they not got spares?

20 MR. SCOTT: I don't know. If you
21 want a crashcart, if the Commission tells me they
22 want a crashcart --

23 THE COMMISSIONER: No, no. I don't
24 want to have it if it is going to be used.

25 MR. SCOTT: If the Commission tells
me it wants a crashcart and I don't care why, if the



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Commission tells me it wants it, I will see --

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THE COMMISSIONER: I want a crash-
cart as long as it is not going to interfere with
the operation of the Hospital business.

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MR. SCOTT: I will tell the Hospital
that the Commission has ordered, if there is no
interference with the administration, that a crashcart
be produced and it will be produced.

9

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MR. LAMEK: Mr. Commissioner, do
you really want a cart or will a photograph do?

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THE COMMISSIONER: I don't know.
Do you want the things that are with the crashcart?

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MR. STRATHY: If a crashcart is
available --

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THE COMMISSIONER: Well, if a
crashcart can be readily made available we will have
it in, but let's not have it in until we are going to
make use of it ourselves; namely until we know that
Mr. Strathy is going to do his cross-examination.

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MR. SCOTT: Right. Well, I take it
he will let me know the night before so I will be
able to judge.

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THE COMMISSIONER: Yes.

MR. SCOTT: We will try --

THE COMMISSIONER: That may turn out



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to be tomorrow and it may not. That is all I can
say.

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MR. SCOTT: Well, as I have to
get the crashcart, I will do my best to see that it
is not tomorrow!

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THE COMMISSIONER: Yes. All right.
Then I suppose you will do your best by extending the
cross-examination. Whatever method. All right.

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MR. SCOTT: I take it the nurses'
requests will be dealt with in the same way when they
want to present them?

12

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THE COMMISSIONER: Well, if there
is anything they ask that you do not think is
appropriate, then obviously they have to make applica-
tion here and they would have to satisfy me that it
had some relevance to something.

16

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MR. SCOTT: Now it says -- the
crashcart I can produce without any trouble. It is
a physical object. It says "samples of the medications
contained on the crashcarts during the same period."

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21

Is that what my friend Mr. Strathy
wants me to bring?

22

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THE COMMISSIONER: It hasn't
changed or has it?

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MR. SCOTT: I don't know. Dr. Rowe



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says it has changed.

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THE COMMISSIONER: Changed radically?

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THE WITNESS: Very radically.

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MR. SCOTT: We have to construct
a crashcart with components as at July 1980. Now if
it is necessary it shall be done.

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THE COMMISSIONER: Well I am not
going to ask Mr. Strathy to reveal all his intended
cross-examination, but I can see that it might be
relevant, so therefore my sympathies go out to him,
that is all I can say on this thing. If you can.
Now if you can't, if some of the ingredients have
been thrown away and never to be found again, you will
just have to say that. If they are still there... It
is not that long ago.

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MR. SCOTT: I will try to find out.
I am not sure that there is an inflexible rule as to
what is to be found on the crashcart. Now I will try
and find out all of that and produce something that
I can persuade everybody looks like a 1980 crashcart.

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THE COMMISSIONER: Well, it is in
some -- it may be in the Dubin report there somewhere
I have read exactly what is on it. I think it is the
Dubin report but it might be something else. It might
be that secret document that none of us knows anything



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2 about. At any rate somewhere I have read it.

3 All right. Does that solve your
4 problems then for the moment?

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MR. STRATHY: Certainly for the

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time being it does.

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THE COMMISSIONER: Yes, all right.

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Okay.

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MR. LAMEK: Mr. Commissioner, just

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to follow up on what has just happened. I'm delighted

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that these requests are not being addressed to me

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and I think it is super that they're going to a much

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more receptive fellow like Scott. It would however

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be useful if when counsel want to make requests for

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material from other counsel I at least be advised of

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what it is they're asking for and perhaps in due

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course what it is they receive. I'm perfectly

happy that the request go by me as long as I'm

informed of them.

15

THE COMMISSIONER: Mr. Strathy, I

16

think, after finding out what Mr. Percival has to

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say and what you had to say we will probably take a

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Xerox and have it copied and sent to everybody in

19

town.

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MR. LAMEK: I think it would be

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useful if I had it at any rate.

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THE COMMISSIONER: Yes, all right.

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MR. LAMEK: And also what the

response is to it.

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THE COMMISSIONER: Yes, all right.

MR. SCOTT: It's always the way,
Mr. Strathy gets a crash cart Mr. Lamek wants a
crash cart.

MR. LAMEK: I don't want one but I
would like to know that he has one.

MR. SCOTT: Well now, may I carry
on?

THE COMMISSIONER: Yes, by all means.

MR. SCOTT: Q. Now, I think,
Dr. Rowe, we finished up in general terms with the
procedure that is followed when the coroner is
notified and comes in.

After a coroner has been notified,
agrees to accept the case, you've told us that he
commences his investigation of it and I take it that
if he directs further investigation or directs an
inquest, that is a matter in which you and the
cardiologists play no role whatever; in other words,
you hear about it in the normal channels?

A. Yes.

Q. You have no input as to his
decision as to whether the case should be taken up,
as to whether, apart from phoning him, as to whether
the case should be investigated, as to the way the case



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should be investigated or to whether an inquest
should be called?

A. No.

Q. And in due course you receive
the coroner's report which sets out a cause of death.

A. We have not always received
that to my knowledge, but it now is the process where
we eventually do get that report.

Q. Yes, I see. Well now, I want
to come to deal with July and August in 1980 but
before doing so, there are two matters I would like to
raise.

The new diagram, Mr. Commissioner,
you see on the wall, which will be proved in due
course, is a representation in slightly different
format of the cardiac line, the all cardiac death
line on the chart that was here yesterday.

The way it works, I think copies are
provided to other counsel in not quite as colourful
form, but the way it works is, on the left hand and
the right hand side are deaths in multiples of five,
which can be counted out by a measurement, and it
runs from January 1st, 1976 month by month to
December 31st, 1982, the same period that is covered
in the previous chart.



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You can visually compare months in any series of years; for example, all the Januarys are on the left, all the Februarys are next and so on.

I wonder if, subject to my proving that it was prepared by the Hospital and is based on the figures collected for the previous chart, that could be an exhibit.

THE COMMISSIONER: Yes, all right, Exhibit 128.

---EXHIBIT NO. 128: Chart entitled "Total Cardiac Deaths by Month".

MR. SCOTT: And there's a smaller diagram for you, yes, you haven't got one, it's uncoloured and perhaps Mr. Strathy could hand that up.

Q. Dr. Rowe, I want to talk about the cardiology ward in a slightly different context now.

You've read the Dubin Report, have you?

A. Yes, I have.

Q. Yes. And in that report, and I just want to confirm it, Mr. Justice Dubin and his colleagues say that 60 per cent of the cardiology cases that are treated in the Hospital for Sick Children come from outside Metropolitan Toronto.



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A. That's my understanding.

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Q. Yes. And would you agree

4

that the Cardiology Division of the Hospital attracts,

5

if that's the appropriate word, cases from all over

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the country and, indeed, from other places in North

7

America?

8

A. Yes, it does.

9

Q. Yes. And it is correct to

10

say is it not that it is the largest pediatric

11

A. Yes, it is.

12

Q. Do you know how it ranks

13

worldwide?

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A. I think it's still in the

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same range there.

16

Q. So, it's the largest in the

17

world?

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A. I'm not sure of any that

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are bigger.

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Q. And this is an achievement,

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it is even larger than the Texas Children's Hospital
in Houston as far as cardiology is concerned?

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A. Yes.

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Q. And the Boston Children's

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Hospital in Boston?

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A. Yes.

Q. Indeed, those two hospitals, I think you've told me, have half the number of cardiology beds that Sick Children's in Toronto do?

A. Have half the number of total beds that the Hospital has.

Q. Q Total cardiology beds?

A. No, total beds in the Hospital.

Q. I see. Are you able to compare their total?

A. Their cardiac beds are rather similar but they're smaller in number, closer to our figures.

Q. I see. And that among the hospitals that do cardiology for children, these three hospitals, Sick Children's, Boston Children's and Texas Children's are generally recognized as the best on the continent?

A. Yes, I think that's probably true.

Q. And the Chairman of your Board of Trustees asked me to bring this to the Commission's attention, even though Boston Children's and Texas Children's have fewer beds, Sick Children's



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has to operate on the same budget as those two hospitals do in cardiology.

THE COMMISSIONER: Are these Canadian or U.S. funds?

MR. SCOTT: They have U.S. funds, we have Canadian funds.

THE COMMISSIONER: That's no part of my terms of reference.

MR. SCOTT: I thought that might be Recommendation 1.

Q. I take it, Dr. Rowe, that you were at Johns Hopkins in Cardiology from 1963 to 1973.

A. Yes, I was.

Q. And at Johns Hopkins the Cardiology Unit, as I understand, is about a third of the size, am I right?

A. Yes.

Q. Yes. But wasn't it so that at Johns Hopkins the staff was the same size as you have at the Sick Children's Hospital?

A. Yes.

Q. Is that doctors we're talking about?

A. We're talking about



1
2 cardiologists, yes.

3 Q. Yes. So, you were running
4 and are running a Cardiology Unit that is the same
5 size, has the same number of cardiologists as Johns
6 Hopkins with three times the number of beds?

7 A. Yes.

8 Q. Well now, you have told us
9 that in March of 1980 it was decided in effect to
10 close down 5A and move to 4A and 4B.

11 A. Yes.

12 Q. Can you tell us when that
13 decision began to be discussed, the advisability of
14 making that move?

15 A. It was several years before.
16 I think that it became apparent to me that we were
17 beginning to attract, or to have referred to us more
18 patients; especially, we were being asked to treat
19 younger patients. We didn't have the adequate
20 facilities on the cardiac ward of 5A for the optimal
21 management of infant patients. We had a reasonable
22 setup but it was not in my view such as to be able
23 to cope with what looked to be an expanding role,
24 and part of that was because of the advances in
25 surgical management, meaning that more babies were
being opened to the possibility of surgical treatment.



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Q. Yes. Was it developing that those were younger babies as well as more babies?

A. Well, at that stage I can't recall whether it was younger babies, but I think we were being put in a position that cardiac patients had to be kept in other areas who were younger because we didn't have the facilities.

Q. Was the possibility of surgical relief being extended over this period to more seriously ill patients than it would have been before?

A. Yes, I think that's correct.

Q. So, I take it that some years before cardiological cases which might have been very serious would not have been amenable to therapy or surgery or treatment.

A. Or that the potential for saving those babies was not as good then as it became.

Q. So, would it be correct to say that as you moved down to this move, to 4A, 4B, one of its motives was that you were getting into heavier surgery?

A. Yes, that was true,



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that was the predominant reason I think.

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Q. And would that heavier surgery relate to more seriously ill babies, that is, babies with more severe cardiac malformations than had previously been the case?

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A. Or babies in whom the malformations for which no surgery had been previously suggested or offered.

9

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Q. Yes.

11

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A. For technical or other reasons were now being introduced to the possibility of having something done for them.

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Q. Can you say anything of whether these babies, as far as your impression is concerned, were likely to be younger or older than they had previously been?

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A. Well, we had a distinct impression that we were going to have to plan a ward with more infant beds, so that we were recognizing that we were beginning to see more babies, or had the need to have more babies on that ward who were infants than we had been able to deal with before previously in the old ward.

23

Q. Right.

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A. That's all I can say. We



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don't have precise figures on that.

Q. I think we have this somewhere
but I think the ^{CBC} interestingly enough have it
wrong. How many beds were there in 5A?

A. I think there were 38 beds
said to be on 5A.

Q. And how many beds were there
on 4A, 4B?

A. There were 42 altogether;
there were 19 I think on 4A and 23 on 4B. I've had
trouble with those numbers myself in the past, you
may recall.

Q. Well now, when did the
physical move take place?

A. That was in April, April 1st
I think, '80, I can't remember the exact date, I
think it was April.

Q. Now, before the move on
April 1st had there been any change or alteration
in the practice of making admissions or affecting
the volume of admissions to 5A which was just going
to be closed down?

A. I can't remember precisely,
and it may be that the head nurse from the floor
could answer that question better, but my remembrance



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of it was that we did make some adjustments to
elective admissions during that time until, while
the ward was being transferred and in the week or so
before or after at least.

Q. All right. Now, elective
admissions would be what?

A. That would be patients
who were coming in for cardiac catheterization
electively just for a 48 hour admission. These would
be patients who had less severe conditions who
demanded at some point a hemodynamic study, or
patients who had had surgery previously and who were
being evaluated by cardiac catheterization sometime
after the surgery.

Q. You say those were the less
serious cases, but were they elective in the sense
that their arrival at the Hospital could be postponed?

A. Yes.

Q. Now, you have no figures on
this?

A. No, I can't recall exactly.

Q. Is this just your impression?

A. It's just my remembrance of
it, it may be faulty.

Q. Well now, what was your



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impression by, say, mid April or toward the end of April about the kind of cases you were getting in 4A and 4B?

A. Well, I don't recall what the mix was at that time. I don't have the data to say what the proportions were. I'm not sure when the infant component of that ward reached its maximum capacity, whether it did that immediately or took some weeks or so to do.

Q. But when it reached its capacity, did you have any impression as to whether there were differences between the patients in the new 4A, 4B, as opposed to the patients who had been in 5A?

A. Well, we felt that fairly early on that we were getting more ill infants, but I can't tell you precisely when that came about.

Q. Did you not tell me that that was the expectation that led you to move to 4A, 4B?

A. Yes.

Q. All right. Now, I want to come to July and August which have been selected by others wiser than me as the beginning of this period that we have to look at. I want to first of all revert to the morning conference that you and your



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cardiologists, interns, residents, nurses had when
you would interalia review deaths. You've told
us all about that this morning. I take it that your
death review would extend to cardiac deaths on the
ward, cardiac deaths in the operating room and
cardiac deaths in the ICU post-op.

A. Yes, it would.

Q. Yes. So, when you were
reviewing cases every morning, if there were deaths,
reviewing the surgery and management treatment, you
were dealing not only with ward deaths but all
cardiac deaths that came from those three places.



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A. And also from the newborn intensive care unit.

Q. I am sorry, also the neonatal unit?

A. Yes.

Q. Now the nine-month epidemic period we know that there were 36 deaths that are being reviewed by this Commission, I have got that right?

A. Yes.

Q. How many deaths in the same nine months were there in O.R. and in I.C.U.-Post Op that you would have reviewed?

A. I think there were another 30.

Q. How many were there from 7G?

A. I am not sure what the total number from 7G would be, I know that there were another 10 babies who died in the operating room or the I.C.U. on transfer.

THE COMMISSIONER: We have all those figures, have we not, from Dr. Bryson, were all those figures given to us, I think they are in an exhibit.

MR. LAMEK: Those numbers didn't include 7G or the I.C.U., Mr. Commissioner.

THE COMMISSIONER: No.



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MR. LAMEK: But I think they should be on the chart that was introduced yesterday, shouldn't they?

MR. SCOTT: Yes.

Q. The reason I asked the question, and I get the total of 76 and I think, Dr. Rowe, that was provided to me by you, was it not?

A. Yes.

Q. That will be the total number of deaths in the Cardiology Division that you would have reviewed as they occurred morning by morning?

A. Less the number that died on the neonatal floor that were not transferred for surgery. I mean plus that group that I have.

Q. If you have 36 on 4A/4B, 30 Operating or Post Op-I.C.U., and 10 which were from 7G to the Operating Room, or the I.C.U., you have a total of 76?

A. Yes.

Q. Those are the deaths that you would have reviewed at the morning meetings over this nine-month period?

A. Plus the extras that occurred on the neonatal floor.

Q. If there were any deaths that



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occurred in the neonatal ward you would have reviewed them as well?

A. Yes.

Q. Have you any information as to how many of those deaths there were during the epidemic period?

A. I don't have those at hand but I can determine that.

Q. All right. Well now, when you were looking at deaths in your Division, at any time, but certainly at the beginning of the epidemic period, I take it the gross figures you would look at would be the totals, you wouldn't break them out into ward, I.C.U., O.R. or 7G?

A. No, we haven't done that.

Q. And that is not, that has not been the traditional practice in Cardiology at the Hospital?

A. No.

Q. You look at the gross figure in your Division?

A. Yes.

Q. And are there cases from time to time where it is, where it may be an accident of timing as between the parts of your Division where the death occurs?



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A. Yes.

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Q. A patient being transferred from the ward to I.C.U. may die in either of those places depending when the fatal event occurs?

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A. Yes.

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Q. Now I have just worked it out, and that is just a little in excess, averaging it out of say eight or nine deaths a month. Now on the graph they appear differently, but it is about eight or nine deaths a month that you would have looked at in gross?

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A. Yes.

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Q. I haven't been able to add in the deaths of the neonatal ward, but if you take 76 over nine months that is somewhere between eight and nine deaths a month, averaged.

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Now if you look at the chart on the wall you will see July and August of 1978, can you fix your eyes on that?

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A. Yes, I can.

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Q. And those are all cardiac deaths which would include, as your figures don't, the neonatal ward deaths and perhaps some others and they average out to about 13 for July, and 13 for August.

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A. Yes.



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Q. Now that is, as you will see from the bar graph, looked at in one way an elevated figure, I mean 13 is more than 10?

A. Yes.

Q. I have done the counting and it will simply save you the trouble but I have to put ---

THE COMMISSIONER: We are looking in other than, in 1980, is that it?

MR. SCOTT: In 1980.

THE COMMISSIONER: Yes, all right.

MR. SCOTT: Q. That in July and August there were 13 cardiac deaths. If you had gone back, and I am not saying you did, but if you had gone back over the history of the Hospital to January the 1st of 1976, you would have seen and I have to prove this chart, but you would have seen that there were 19 months when cardiac deaths exceeded 10. Now you have to take that from me, but you can see that there would be a substantial number of months?

A. Yes.

Q. And I have counted them up and I will tell you subject to correction that there are 19 months in which cardiac deaths exceeded 10 before we get to July and August of 1980 where they were 13 on the chart.



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Now, if you go forward and you didn't have the luxury of doing this, from the epidemic period, you would see that between the end of the epidemic period and the end of the chart, December 1982, there were five months when cardiac deaths exceeded 10. You can see some, can't you?

A. Yes, I can.

Q. I have counted that and I think there are 5.

MR. LAMEK: Which of the 19?

MR. SCOTT: Well, I have got the 19 if you want the months because you can read them as well as I can.

MR. LAMEK: I can't, I don't get 19.

MR. SCOTT: January 1977, February 1977, April 1977, May, 1977, May 1976, June 1976, May 1979, June 1978, April 1980, July 1978, August 1978, September 1976, October 1976, November 1976, December 1976, October 1978, November 1978, December 1978. The months after the end of the epidemic period are January 1982, August 1982, September 1982, November 1982 and December 1981.

MR. LAMEK: I am sorry, the confusion was my friend referred to months in excess of 10 and I rather literally thought he meant more than 10.



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MR. SCOTT: 10 or more.

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MR. LAMEK: Thank you.

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MR. SCOTT: I am sorry.

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THE COMMISSIONER: On this diagram
it is hard to tell but I think, oh, I see. For
instance, taking January of 1982, it looks very much
like 10, is that right?

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MR. SCOTT: It is.

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THE CHAIRMAN: I take it February of
1981 would be either 11 or 12?

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MR. SCOTT: Yes. Now the point I am
making and we can all do our own counting, we might
have to get a ruler to do it or borrow the chart, and
it is all subject to proof.

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Q. The point I am making, Dr. Rowe,
and I want your comment on, is that in July when you
confronted the reality that there were 13 cardiac
deaths, five on the ward, there would be nothing in
gross figures extraordinary about that in the sense
that there were many periods when cardiac deaths had
exceeded, had been 10 or exceeded 10?

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A. Yes, that is true.

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Q. So that when you come to
cardiac deaths in the Division the gross figures do
not appear excessively elevated, it is the location of



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those deaths in the Division that appears to be
significant?

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A. Yes.

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Q. Namely on the ward?

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A. That is correct.

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Q. I think you have already told
us that a death that occurred on the ward might turn
into a death that occurred in surgery, I think you
told Mr. Lamek this, if you got the patient into
surgery faster, is that not so?

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A. It is possible.

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Q. Or that a death that occurred
on the ward might properly be a death that would have
occurred in the I.C.U. if the patient had gone into
the I.C.U.?

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A. Yes.

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Q. One other thing, in this period
of nine months there were a number of months, five,
when deaths in the wards fell to three or below and
they are September when there are two, October when
there are three, November one, January when there
is one and February when there were three. Those are
the figures we have.

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THE COMMISSIONER: Those are in the
epidemic period?

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MR. SCOTT: Yes.

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THE COMMISSIONER: And those are
deaths where, on .. ?

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MR. SCOTT: On the ward.

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THE COMMISSIONER: On the ward, yes,
thank you.

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MR. SCOTT: Q. I will put it this
way, those were months within the epidemic period, are
they not, Dr. Rowe, where the ward death rate
returned pretty close to normal?

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A. Yes.

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Q. Now, let's look from our bar
graph if the ward death rate returned to normal in
those periods, let's see what happened to the cardiac
death rate. I ask you to note that in September when
there were two ward deaths, cardiac deaths as a whole
were elevated at 13, weren't they?

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A. Yes.

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Q. In October when you had three
deaths on the ward, cardiac deaths were elevated to
ten?

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Q. In November when you had only
one death on the ward, cardiac deaths remained still
relatively high at eight?

A. Yes.



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Q. In January, which seems to be the happiest month for everybody in the period where you only had one ward death, there were three cardiac deaths?

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A. Yes.

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Q. In February where you were at three on the ward, cardiac deaths in the other divisions came to twelve, way up again. Then of course we have March. Now, the reason I asked you these questions --

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MR. LAMEK: Mr. Commissioner, forgive me, I am reluctant to interrupt but there are two things about this that puzzle me and appear to be contradictory. I don't know where this number of three per month from the ward came from as the average ward death rate. That is certainly at variance with the statistics we have seen so far in this Commission. I would like to know what basis for that.

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Second, my friend is suggesting to Dr. Rowe that deaths on the ward returned to normal whereas the evidence so far from Dr. Rowe in this passage has been since he looked at cardiac deaths in the round he didn't focus on location. I would like some foundation to know where his information comes from as to what is a normal rate and what that rate was?

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MR. SCOTT: That was a misnomer of mine. First of all, and I take this as agreed, I mean, I didn't start this numbers game and I don't place any stress on this kind of graph business, but if we are going to get into it we are going to get into it, I didn't start it, and I want to make that clear.

MR. LAMEK: Let's get into it accurately.

MR. SCOTT: Well, let's get into it accurately. The ward deaths, my friend doesn't disagree that there were 36 in the period.

MR. LAMEK: There were 34.

MR. SCOTT: Well, if you include Pacsai, and Heyworth and Woodcock, and I am including them so we have 36, we are taking the worst case, Mr. Lamek.

Then the Doctor has already told us that in the division, that is in O.R., or Post Op, I.C.U., Cardiology there were an additional 30. All right. Then he told us there were an additional 10 that flow from 7G to O.R.-I.C.U., so you have 76.

Now he says there will be more because he hasn't got the figure for neonatal deaths on the neonatal ward. So you have got 76 plus.

Now when I said that in September



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(Scott)

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there were two deaths on the ward, I am reading and
I hope correctly, I am referring to the death of
Baby Heyworth and Baby Gage who were the only babies
that died on the ward in that month.

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MR. LAMEK: That is correct.

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MR. SCOTT: Now it was perhaps not right to say that two was normal. If that is the point that is being made I concede that.

MR. LAMEK: That is precisely the point.

MR. SCOTT: What I am saying is that two ^{deaths} tens - I don't put it any higher than this - to revert to the normal pattern so-called. In other words if we had two deaths every month in this period I think we would all be off doing something else.

THE COMMISSIONER: I have forgotten what the figures are but I think even two per month would be an enormous number, would it not?

MR. LAMEK: What we do know, Mr. Commissioner, we are talking a slightly different period. In the two preceding nine-month periods there had been respectively six and five ward deaths.

THE COMMISSIONER: Yes.

MR. LAMEK: Which is something less than one per month.

THE COMMISSIONER: Yes.

MR. SCOTT: I ask you, and we have it in evidence and there is no doubt about it, to note that when the death rate per month was falling over this period it was escalating in other parts of



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the Division.

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Q. Now, it was put to you, Dr. Rowe - I don't think it was said as early as July but certainly by the end of August - that you should have been concerned about this, and I think your evidence to Mr. Lamek was that you were concerned and organized a conference and a meeting which was held on September 5th.

A. Yes.

Q. Now I want to analyze with you what you knew on September 5th. I am not interested at this stage to look back with the advantage of hindsight. I want to look at what you knew, and I have asked you to prepare a chart for the eleven babies including Woodcock who are in the first two-month period.

Do you have that?

We have copies of this. It is a three-page chart.

You have got your copy, Dr. Rowe?

THE COMMISSIONER: We should have some better method than this. I don't know how we are going to --

MR. SCOTT: Mr. Lamek tells me the chart hasn't been marked. Could I have the chart marked?



DD3

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MR. STRATHY: It is Exhibit 128.

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THE COMMISSIONER: It is 128 I think.

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MR. LAMEK: Thank you. Sorry.

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THE COMMISSIONER: So this will be

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129?

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--- EXHIBIT NO. 129: 3-page chart containing
information on eleven babies.

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MR. SCOTT: Now, Mr. Commissioner,

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this lists babies on page 1, Woodcock through
Velasquez, who died in July and August, including
Woodcock.

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On page 2 it lists the babies who
died on the ward in September, Babies Heyworth and
Gage. So in these two pages you have the July,
August and September deaths on the ward with which
you are concerned.

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Q. Dr. Rowe, I asked you to
prepare this for me and I would just like to go through
the columns so we will see what we have here.

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Anatomic diagnosis. What is that?

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A. That means the cardiac
abnormality and any associated findings in other
systems.

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Q. Yes. Do you include there



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DD4 2 any extracardiac abnormalities?
3 A. No, they are not placed there.
4 Q. All right.
5 The next item is self-explanatory,
6 the date of death.
7 A. Yes.
8 Q. The next item is the age at
9 death.
10 A. Yes.
11 Q. The next item expressed in
12 zeros and pluses is the presence of extracardiac
13 malformation.
14 A. Yes.
15 Q. Now I see that - perhaps
16 you can tell me - you haven't listed what that
17 malformation is when it is present, but I take it we
18 can get that from the previous exhibit?
19 A. Yes.
20 MR. SCOTT: Has that previous
21 exhibit got a number?
22 THE COMMISSIONER: Yes.
23 MR. SCOTT: As long as it has a
24 mark.
25 THE COMMISSIONER: It is Exhibit 127.
MR. SCOTT: Q. So going down to



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Hoos, for example, who is the first baby who has
extracardiac malformation, we can find out precisely
what that is by looking at the previous exhibit?

A. Yes.

Q. The next item is birth
weight in kilograms.

A. Yes.

Q. The next item is failure to
thrive expressed in pluses and zeros.

A. Yes.

Q. And did you yourself make
that assessment about the failure to thrive?

A. Yes, I did.

Q. Did you make it in the same
way and with the same reservations as you made it
in respect to the chart introduced this morning?

A. Yes.

Q. What does it mean when there
is a zero with a question mark next to it?

A. Well, these -- as I said
this morning there were some reservations about the
estimates which are conservative, and I think it would
be best to have some assessment by a nutritionist
for those where I have questioned -- at least where I



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have questioned the issue.

We can get that done it is just that it is an enormous amount of work for someone if it is required. So I thought I would leave it until you...

Q. Just so that I understand it, you have given a zero which means on the chart that the baby thrived --

A. Yes.

Q. -- but you have noted in effect that the baby is within the first weeks of its life.

A. Yes.

Q. And so you have raised a conservative question mark about whether that would be so?

A. Yes.

Q. The next column is the electrical mode of death.

A. Yes.

Q. And NK means not known?

A. Yes.

Q. Now what is the next one, Bain class? I think I know what that means.

A. The classification -- well, it



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is the classification that was used by Dr. Freedom and myself at the request of Dr. Bain for the I think it is the 40 something cases in his review.

Q. So that classification D-4, C-4, D-3 and so on are the classifications that are included in Dr. Bain's analysis which was made after the epidemic period?

A. Yes. This is on page 32 of Dr. Bain's report and --

Q. Which is also an exhibit here.

A. This is an exhibit I believe.

THE COMMISSIONER: Exhibit 48.

MR. SCOTT: Q. Exhibit 48.

A. And I should say that the status code is explained on the third page of this exhibit. I put it there because I don't believe in Dr. Bain's report it gives as much detail about how that code was used.

Q. So D-4, for example, means severely compromised because that is D and 4 means guarded despite therapy?

A. Yes. This is not a code that is of our making. It is a code that is from a publication of the Criteria Committee of the New York Heart Association.



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Q. At the top of the third page
do you set out the origin of the code?

A. Yes.

Q. Where it is fully described?

A. Yes. The only difference
is that we modify the cardiac status using letters
instead of numbers because in the original paper it
has 1, 2, 3, 4 on both the cardiac status and
prognostic categories. We felt that --

Q. And donkeys like me would
be reading it like 11 when it is 1-1.

A. I thought it would be simpler
if we used something where A-1 meant what most people
mean by A-1 and where D-4 would be reasonably easily
followed.

Q. That code is devised as
set out on the third page?

A. Yes.

Q. And it ties in with Exhibit
48 which is Dr. Bain's post-epidemic analysis?

A. Yes.

Q. Now I am flattered, but what
is the next column, or does this refer to some
independent cardiological expert?

A. Well, some might say that. It



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is your classification.

MR. STRATHY: Mr. Scott complained about Mr. Lamek giving evidence.

MR. SCOTT: Well, you know, mortality is only a short reach for all of us but it may be that I have exceeded my grasp here now!

Q. What was it I intended by these classifications?

A. Well, you --

Q. Just jog my memory.

A. You had asked that we assign a prediction for outcome prior to the time of death on data that was available prior to the time of death.

Q. What do the letters mean?

A. The letters are explained on the second page that I means inevitable, H is high risk and L is low risk, and that is based on the Exhibit 127 section.

Q. All right. I take it just to refresh our memories Exhibit 127 you described high risk as inevitable -- I'm sorry, inevitable as I, high risk is 40 to 80 per cent.

A. Yes.

Q. And lower risk is 0 to 40 per cent.



DD8

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A. Yes.

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Q. And that is now known to

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be as the Scott classification?

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A. I am prepared to accept it as

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such.

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Q. All right.

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Now the next column is post mortem

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and that refers to the fact that one was or was not
done.

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A. Yes.

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Q. And then the last column is

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notified Coroner.

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A. Yes.

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THE COMMISSIONER: Mr. Scott, we

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are going to take some time sometime this afternoon.
Is this a good time?

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MR. SCOTT: Yes, sir.

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THE COMMISSIONER: All right. We

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will take fifteen minutes.

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--- recess.

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---Upon resuming.

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THE COMMISSIONER: Yes, Mr. Scott.

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MR. SCOTT: Thank you.

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Q. Dr. Rowe, looking at Exhibit

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129, page 1 is July, August deaths, page 2 is the
two September deaths, is that right?

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A. Yes, with the addition of

Woodcock.

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Q. With the addition of Woodcock.

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The totals on page 2 are for Woodcock July, August
and September deaths.

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A. That's correct.

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Q. Yes. And let me just go

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through the totals. The median age and there you
mean the middle age, is that correct?

15

A. The middle age, yes.

16

Q. And I take it you have

17

selected the middle age because these babies were
11 years and 15 years, is that correct?

18

19

A. That's the reason, and they

would skew the average.

20

21

Q. All right. So, the median

22

age is two months which ties in with the ages in the
New England study, the extracardiac malformations

23

are three out of 11, which is roughly the New England

24

25



1
2 study, birth weights are 3.5, which is a little
3 higher, failure to thrive, there seems to be a
4 misprint there.

5 MR. STRATHY: Excuse me, I've got
6 3.0 on mine.

7 MR. SCOTT: Q. Excuse me, 3.0, so have
8 I have. Failure to thrive is a misprint and I've
9 counted it out with you, it should be 7, shouldn't it?

10 A. Yes.

11 Q. Yes. And the question mark
12 refers, as you have already said, to your concern
13 about the ability to evaluate failure to thrive in
14 three very young babies?

15 A. Yes.

16 Q. Or two.

17 A. Two, yes.

18 Q. Two young babies and one at
19 two months.

20 A. Yes.

21 Q. Then in the Bain classifica-
22 tion, nine of the deaths fall within his Category 4.

23 A. Yes.

24 Q. Is that correct?

25 A. Yes.

Q. And in our effort to



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approximate a similar system before post mortem, I see that nine of the deaths fall into inevitable or the 40 to 80 per cent high risk category. Have I got that right?

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A. I think there may be a slight error there because there are two patients we didn't put into your classification.

9

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13

Q. Yes, Murphy.

A. And Heyworth.

Q. And Heyworth.

A. Because that classification,

you will recall, was meant to make a prediction of outcome in the first year of life.

14

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16

Q. Precisely.

A. So, that makes a change in the numbers at the bottom, I'm sorry about that.

17

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19

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Q. How did it change them, do you know, or should we do this ourselves?

A. You will have to.

MR. LAMEK: Three inevitable, isn't it?

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THE WITNESS: Yes, it cuts out 2 inevitables. I think in adding those up I just forgot that we excluded them.

24

25

MR. SCOTT: Q. So, Mr. Lamek is



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right there are three inevitables, four high risk
and four low risk.

4

A. That's correct.

5

Q. And post mortems were done

6

in every case except Heyworth, Baby Heyworth.

7

A. No, Bilodeau.

8

Q. Oh, Bilodeau, I'm sorry.

9

A. Bilodeau, Murphy and Heyworth.

10

Q. Bilodeau, Murphy, Heyworth,
yes, right.

11

Now, if you look at this chart for

12

July and August the information that is disclosed

13

here would have been information that was in the

14

record in some form or another by September the 1st.

15

A. Yes.

16

Q. Yes. So, the death of the

17

10 babies, I'm sorry, the 11 babies including

18

Woodcock on page 1 would have been in the minds of

19

all the cardiological and nursing staff when they

came to the meeting of September the 5th.

20

A. Yes.

21

Q. And I just want to ask you

22

how you characterize those babies from the point of

23

view of severity of illness?

24

A. Well, I think that they're

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very severe with the exception of I think two infants
that are listed, one of them would be Woodcock, as
far as the cardiac condition is concerned.

5

Q. Yes.

6

A. The other one was Velasquez.

7

Q. All right. Well now, with
the exception of Woodcock, Dawson and Velasquez where
the coroner was notified by a cardiologist in the
hospital, were you satisfied as at September the 1st
that you had ascertained with a reasonable degree of
assurance the cause of death of each of these babies?

12

A. Yes.

13

Q. Now, with respect to Woodcock,
you notified the coroner because you were not certain
about the cause of death?

15

A. That's correct.

16

Q. And a post mortem was done.
Were you able thereafter to ascertain the cause of
death?

19

A. I just can't remember offhand
when we got that information but when we had that
information we felt that the explanation was in that
report.

22

Q. Yes. So, when you got the
coroner's report, were you satisfied that with the

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assistance of it you could with reasonable assurance ascertain the cause of death in Baby Woodcock?

A. The pathological information. I don't remember whether there was a coroner's report or hospital report.

Q. How about Velasquez?

A. Well, Velasquez was a baby where there was, you will recall, a question of a reaction to naloxone, a drug that was administered intravenously and that was the principal reason that we had concerns there. We were not expecting that death and it was related to the injection, temporary to the injection of the drug.

The issue was not resolved completely by the coroner's evaluations but it was our conclusion that this was something to do with the naloxone.

Q. Now, with respect to Dawson you've already told us that you were satisfied as to the cause of death to a reasonable degree of assurance and would not yourself/^{have} notified the coroner in Baby Dawson's death.

A. Yes.

Q. Yes. Was there anything in the coroner's work that confirmed your opinion or led you to re-evaluate your opinion?



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EE7

A. I'm not sure. I don't believe so but I'm not absolutely sure. I would have to look at that information.

Q. Well then, leaving Velasquez aside and with that reservation about Dawson, and perhaps you can look at it overnight, was there anything in the deaths of any of these babies which left a sense in you or the other cardiologists that you had not developed with the raw material a reasonable conclusion and the proper conclusion about how these babies died.

A. No.

Q. Now, let me give you some other material about these 10 babies.

All of these babies, these 11, were all on digoxin therapy - I'm telling you that, I've got the record and I think it can be sustained - at Sick Children's Hospital with the exception of Baby Woodcock who had been digitalized before she came to Sick Children's Hospital, and none was administered at the Hospital.

A. I believe so.

Q. You are aware of that?

A. Yes.

Q. Now, in a number of these



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11 babies pre-mortem serum levels were obtained, and I'm just going to read them off to you because that's something you would have known when you came to the September meeting.

A. Yes.

Q. In Dawson the pre-mortem serum level was 1.9, in Hoos it was 1.7, in Turner it was .9, in Monteith it was 2.5, and in Murphy it was 1.8.

Now, I'm telling you, and we will have to let the record show that I am right as I think or that I am wrong, that those were the only serum levels that were available or were taken or were available for any of these babies who died in June, July or August. Is there anything in those serum levels, looking at it as you would have done in September, 1980, that would give the slightest cause for concern about the possibility of digoxin poisoning in these babies.

A. No, I don't think so.

Q. They are all within the therapeutic range?

A. Yes.

THE COMMISSIONER: Some schools of thought the Monteith one might be a little high, was



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there not?

THE WITNESS: I would accept it for that age, Mr. Commissioner.

THE COMMISSIONER: All right.

MR. PERCIVAL: I'm sorry, I didn't get that, Mr. Commissioner.

THE WITNESS: I'll accept it for that age because there is a difference.

THE COMMISSIONER: Monteith was...?

MR. SCOTT: Two and a half months.

THE COMMISSIONER: Yes, all right.

MR. SCOTT: Q. Now, I take it that in this period there were no post mortem serum levels done?

A. No.

Q. Were you aware at that time of any hospital for the cardiological treatment of babies anywhere in the world that routinely did post-mortem levels?

A. No, I wasn't.

Q. No. Now, nine of the 11 on this page -- oh, I've dealt with that -- I'm sorry, nine of the 11 on the first page went to autopsy, and was there anything in those autopsy reports that was inconsistent with your conclusions about the



EE10

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cause of death?

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A. No, the only patient in which
we had obtained new information was in Woodcock.

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Q. I see.

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A. And that was information

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that was not entirely confined to the heart, it was
pneumonia.

8

Q. All right.

9

A. And the infraction, I'm sorry.

10

Q. Well, was there anything

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alarming then in the autopsies?

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A. No.

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THE COMMISSIONER: Well, that's

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what you were talking about, we're not talking about
the autopsies?

15

THE WITNESS: There was nothing

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alarming in the autopsies.

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MR. SCOTT: Q. Well, now let me

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give you one other factor.

19

A. Nothing that was different

20

from what we had projected except for Woodcock.

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THE COMMISSIONER: All right.

22

MR. SCOTT: Q. And what you were

23

looking for, if I have it right, just so you can
refresh my memory in Woodcock had something to do

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EE11

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with the origin of the jaundice.

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A. The jaundice and the way in

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which the baby died.

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Q. Now let me give you one other factor. With respect to the 11 deaths that occurred in June, July and August that are set out in page 1, seven out of those 11 occur between midnight and 6:00 a.m. I can give you the detail of the times but I don't think that is necessary, it is perhaps only necessary to give you the names of the babies who died between those hours, and I think those are the hours on which Mr. Lamek questioned you: Bilodeau; Taylor; Dawson; Hoos; Turner; Monteith and Velasquez.

THE COMMISSIONER: I missed one somewhere along the line.

MR. SCOTT: I am sorry, sir?

THE COMMISSIONER: I missed one of those.

MR. SCOTT: Oh, Bilodeau, Taylor, Dawson, Hoos, Turner, Monteith and Velasquez.

THE COMMISSIONER: Between midnight and 6:00 a.m.?

MR. SCOTT: And 6:00 a.m. I have got the times, Mr. Commissioner, but I don't know --

THE COMMISSIONER: No, I have them all, they are all in the Statement of Facts.

Q. Now, that was referred to as a certain clustering of the deaths in your Examination



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3 in Chief. You were asked by Mr. Lamek whether you
4 found anything alarming, or a matter of concern about
5 that. I think that you said, I can turn up your
6 evidence, but I think you said that you didn't and that
7 it was your impression that young babies more often
8 die at night?

8 A. Yes.

9 Q. Was that an impression that
10 you had in September of 1980?

11 A. Yes.

12 Q. Was it an impression that you
13 had formed from your clinical experience, or from your
14 reading?

15 A. From my clinical experience.

16 Q. Was it an impression that you
17 believed to be shared by your other professional
18 colleagues?

19 A. Yes.

20 Q. Now let me just stop there for
21 a minute and deal with who is there in the day and
22 who is there in the night. We have heard about the
23 doctors who are there in day and night; and we have
24 heard about the nursing staff. I take it that the
25 head nurse is away during the night time hours?

A. Yes.



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Q. The students are away during
the night time hours?

A. Yes.

Q. Now, who are the students?

A. These are nursing students who
are assigned to the ward as part of the educational
training program.

Q. Do you know how many there are?

A. No, I don't.

Q. The clinical instructors are
not present during the night?

A. No.

Q. And, of course, most of the
doctors are not there during the night?

A. That is correct.

Q. And I think you also commented
that one of the reasons that you had concluded that
this phenomenon was real was because there were fewer
people there at night; and secondly, because it was
darker, or darker than during the day?

A. Yes.

Q. And that would affect one's
physical capacity to observe the colour of the baby?

A. To some degree, yes.

Q. Now, have you since become



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aware of a study that has been done on this subject?

A. Yes, I have.

Q. Have you got it before you?

A. Yes, I have.

Q. And I don't know if we have
copies for everybody, but this was a study, as I
understand, done at the --

MR. LAMEK: We don't have a copy.

MR. SCOTT: Well, we gave you one
yesterday.

THE COMMISSIONER: I'm beginning to
suspect that Mr. Scott produces these documents about
this hour of the afternoon.

MR. SCOTT: It gives me a chance too.
This is a study that was done --

MR. LAMEK: Mr. Commissioner, forgive
me again. I think Mr. Scott, entirely innocently, I
know, has perhaps misstated Dr. Rowe's evidence on his
response to learning of the time of death of these
children. The question that was asked of him at page
1754 in Volume 10 was:

"Q. Did it strike you or did it
occur to you as being in any way
unusual that many of these children
had died at night?



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"A. Yes. I think you would say it was a little unusual but at that stage the numbers weren't of a sufficient degree to really cause us great consternation."

That is Dr. Rowe's evidence and my friend suggests that it didn't strike him as odd at all.

MR. MANNING: There is also another passage that might be helpful in Volume 12, page 2024, I think that is what Mr. Scott is referring to. Page 2024 is on your side and page 2025 is on his.

MR. SCOTT: Well, I am not in a position, Mr. Commissioner, to go through and find out what Dr. Rowe said precisely and it will have to be analysed, because he discussed it at some length with Commission Counsel.

MR. COMMISSIONER: I could leave it entirely alone if the question hadn't been a little on the leading side. If you had simply said, what was your impression, and he had said something different from the time before then I could have let it pass.

MR. SCOTT: There is no point in my trying again.

THE COMMISSIONER: Since you led him, I think we had better find out what he did say.



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Mr. Manning, yours is --

MR. MANNING: 2024, Volume 12.

THE COMMISSIONER: At what line?

MR. MANNING: Line 14.

MR. LAMEK: And Volume 12, 2025.

THE COMMISSIONER: Well, a considerable
portion of patients that die at night, and I think,
Dr. Rowe, you are the one we are worried about and
perhaps you had better read what you said, page 2024
and the other one is --

MR. LAMEK: And the following page
2000 --

THE COMMISSIONER: And the following
page, if you would look at both of those and then
perhaps tell us what --

MR. LAMEK: The earlier reference was
Volume 10, page 1754.

THE COMMISSIONER: What was the page
again, Mr. Lamek?

MR. LAMEK: 1754, sir.

THE COMMISSIONER: You can read that
and the question which I heard that is not leading is,
do you or do you not expect a major or a minor
proportion of deaths to take place at night. In fact,
what proportion, if any, do you expect would take



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place at night?

THE WITNESS: Well, it depends upon
the age of the patients in the ward, Mr. Commissioner.

THE COMMISSIONER: Let's take the
young ones first and then deal with the middle-aged
ones.

THE WITNESS: If you are dealing with
young patients, you would expect the possibility of
more at night.

THE COMMISSIONER: You would expect
more at night?

THE WITNESS: Yes.

THE COMMISSIONER: Not the possibility
of more at night?

THE WITNESS: No.

THE COMMISSIONER: You would expect
more to die in the middle of the night?

THE WITNESS: Yes.

THE COMMISSIONER: Can you tell me why?

THE WITNESS: That is just what our
experience suggests, that babies are likely to do that.

THE COMMISSIONER: Those are babies
that are under what age?

THE WITNESS: In the first year.

THE COMMISSIONER: And after that?



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THE WITNESS: I beg your pardon?

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THE COMMISSIONER: After that?

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THE WITNESS: After that, you would

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expect a more equal distribution, I think, I

6

wouldn't quarrel with what is being said, I agree.

7

THE COMMISSIONER: What was said

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either by you or Mr. Scott?

9

THE WITNESS: I wouldn't quarrel with

10

either, but I will not suggest that I said anything

11

other than what is in those transcripts.

12

Q. Well, let me just see if I can,

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before anticipating Mr. Lamek's reply, let's see if

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I can just get again what your impression was in the

15

event of the so-called clustering in September of
1980?

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A. Well, we didn't feel, I think,

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that the numbers were hugely a departure from what

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one might have expected. I agree that there were

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more than in an ordinary ward you would say might be
the case but it didn't seem to me that the numbers --

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THE COMMISSIONER: Numbers of times,

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which are we talking about here?

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THE WITNESS: The numbers.

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THE COMMISSIONER: The numbers?

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THE WITNESS: The numbers that died

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at those times, yes.

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THE COMMISSIONER: I'm sorry, again,
I missed that.

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THE WITNESS: The numbers that at the
times were sufficiently small that I don't think we
would be concerned.

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THE COMMISSIONER: Your concern now,
this is in answer to the question about dying at
night as opposed to the numbers that --

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THE WITNESS: Yes.

THE COMMISSIONER: -- died at night
and you didn't think it was hugely disproportionate,
is that it?

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THE WITNESS: No, I don't think so.

Q. Now, have you read this
McMaster University Medical Centre study?

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A. Yes, I have.

Q. Let me just read the headnote:
"Variables related to both --

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I should ask you one other thing,
have you also read the study that is referred to in
Note No. 11 to the article, an article by Stanley
and Alberman:

"Infants of low birth weight
perinatal factors affecting
survival ... "
which I think is called an Ormond Street Study, is
that right?

A. It is a study from London,
England anyway.

Q. Have you read that?

A. Yes, I have.

Q. And let me read the headnote, I
wonder if doctors call them headnote, but it is the
headnote:

"Variables related to both the
process and the outcome of neonatal
intensive care were studied to compare
care given during the day with that
at night. At night, intravenous
infiltrations occurred more often,
and the tidal volume of respirator
treated infants was verified less
often. Blood pH values less than



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"7.20, excluding values within 12 hours of admission, were recorded more often and in more patients at night. During a 12-month period, there were significantly more deaths among infants less than 1500 grams during the night than during the day. The deterioration of infants at night may result in part from current nursery staffing practises."

Then I would like to take you to page 3 under the heading "Mortality".

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THE COMMISSIONER: Shall we make
this an exhibit before we go any farther?

MR. SCOTT: Yes, if you would,
please.

MR. LAMEK: Well, Mr. Commissioner,
with respect, I object to that. If the balance of the
article bears out the abstract it has no application
to this case. The material we have before us in
Exhibit 127 indicates no child falling into that
group under 1500 grams at birth. And therefore its
relevance is yet to be demonstrated in my submission.

MR. SCOTT: Well, if Commission
Counsel doesn't want it in we will refer to it in
argument and we won't put it in. I don't want to be
difficult. He is taking a very aggressive line here.

THE COMMISSIONER: Oh, no, it is
4:25. That is the reason for the aggressive line I
think!

No, there is no reason why -- I can
treat all of these with grains or with mountains of
salt since they don't appear to be of any assistance.
If you want to put it in so it will be available
rather than having to pick it up in argument, I am
quite happy to have it go in. But are you withdrawing
it? Do you not want to put it in now?



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MR. SCOTT: No, if my friend is taking a technical line I don't want to get in his way.

THE COMMISSIONER: No.

MR. SCOTT: I will just file it with a brief of other articles that I intend to file at the end.

THE COMMISSIONER: I think, Mr. Lamek, it is too late to try to keep out matters that aren't relevant.

MR. LAMEK: Mr. Commissioner, it is not a technical position. I will withdraw the objection but I have a very serious reservation as to its relevance.

THE COMMISSIONER: Yes, that is fine but that all goes to weight.

MR. SCOTT: And that is usually found in re-examination.

THE COMMISSIONER: Let's give it a number. 130.

--- EXHIBIT NO. 130: McMaster University Medical Centre Study referred to.

MR. SCOTT: Q. Let me read, doctor, the paragraph under "mortality" on the third page:



Rowe
ex. (Scott)

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GG3 2 "Of 63 deaths between July 1, 1973
3 and June 30, 1974, significantly
4 more deaths occurred at night than
5 during the day."
6 And then it refers you to a table where those figures
7 are shown were both less and greater than 1500 grams.
8 "The increased frequency of death
9 at night was found entirely in the
10 infants weighing less than 1500
11 grams at birth. A large tension
12 pneumothorax was identified as the
13 cause of death for four infants at
14 night and one during the day. In-
15 tensive care was continued for
16 infants who developed intraventricular
17 hemorrhage, and the greater
18 mortality at night is not explained
19 by termination of their ventilator
20 care. Nine infants less than 1500
21 grams birth weight died within 12
22 hours of admission; six died at night
23 and three during the day. The
24 greater number of deaths at night
25 among infants less than 1500 grams
is statistically significant, whether



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or not infants who died within 12 hours of admission are excluded.

Mortality data are further analyzed according to post natal age and hour of death. Death occurred at night in 29 of 46 infants who died within the week following delivery, four of seven infants who died at 7 to 28 days and seven of ten infants after 28 days. The most deaths within any four-hour period of the day and night occurred between 0101 and 0500 hours (15 deaths)..."

That is the very period my friend is so concerned about.

"...and the fewest between 1001 and 2100 hours (three deaths). Seven deaths occurred between 0901 and 2300 hours, thirteen between 1301 and 1700 hours, thirteen between 2101 and 0100 hours, and twelve between 0501 and 0900 hours."

And then they break it out according to days of the week and I won't trouble you with that.



GG5

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And then the last paragraph of
"We found evidence for a decline at
night in both the quality of care
and the condition of infants in
our unit. Stanley and Alberman
have recently related levels of
staffing to neonatal mortality at
various hours in London hospitals,
noting a nocturnal increase in
mortality similar to that which we
observed. Their findings, like
ours, suggest that the deterioration
of seriously ill infants at night is
an important problem in neonatal
units which may be, in part, pre-
ventable. Current neonatal staf-
fing practices deserve experimental
study to define the effect of staff
number and staff schedule on the
quality and outcome of neonatal
intensive care."

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22 Now, did you following that read the
Stanley and Alberman paper?

23 A. Yes, I did.
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Q. What does it talk about?

A. Well, it talks about neonatal mortality in babies of slightly higher weight and emphasizes the fact that an excessive proportion of the deaths occurred between midnight and 9:00 a.m.

Q. Now, I don't want to get Mr. Lamek any more upset --

MR. LAMEK: Don't worry about it, Mr. Scott.

MR. SCOTT: Q. But my understanding of the Stanley and Alberman paper, it deals with babies over 2 kilograms.

A. Yes.

Q. Is that your recollection?

A. It deals with infants of 2 kilograms or less.

Q. Or less. I see.

THE COMMISSIONER: They are less?

MR. SCOTT: Q. So they are slightly heavier babies than the ones dealt with in this study?

A. That is correct.

THE COMMISSIONER: I find that hard to accept reading as it is because the title is "Infants of Very Low Birth Weight". That is the title



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of this article of Stanley and Alberman.

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Did you say the Stanley and Alberman
deals with smaller babies?

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THE WITNESS: They deal with babies
who are somewhat larger than --

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THE COMMISSIONER: Larger? That is
what I thought. I think you said smaller.

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MR. SCOTT: Oh, I'm sorry. I'm
getting tired. I meant to suggest larger; that the
babies in the London study are larger than the babies
in the McMaster study.

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THE COMMISSIONER: No, I think it
is the other way around.

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MR. SCOTT: Q. Have I got that
right, Dr. Rowe? You read them both; I haven't.

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THE COMMISSIONER: I think you have
got it wrong and the doctor and I have got it right.

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MR. SCOTT: Well, I have got Mr.
Lamek on my side now!

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MR. LAMEK: If that doesn't worry
him I don't know what will!

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MR. SCOTT: It means possibility to
an absolute assurance.

THE COMMISSIONER: Dr. Rowe is the
only one who has read it. Can I just ask him a



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GG8 2 question that I don't think is leading.

3 This Exhibit 130 is the McMaster
4 study which is Hamilton, Ontario, which we all know,
5 but it does make some reference to -- yes, it is
6 Hamilton and it refers to babies newborn, "among
7 infants less than 1500 grams". That is what it says.

8 THE WITNESS: It deals with babies
9 who are both under 1500 grams and over 1500 grams.

10 THE COMMISSIONER: Yes.

11 THE WITNESS: But it finds a
12 difference in mortality only in those babies who are
13 under 1500 grams.

14 THE COMMISSIONER: I see.

15 Now let's go to Note 11 which is
16 Stanley and Alberman - are they London?

17 THE WITNESS: Yes.

18 THE COMMISSIONER: London, Ontario?

19 THE WITNESS: London, United
20 Kingdom.

21 THE COMMISSIONER: London, United
22 Kingdom?

23 THE WITNESS: Yes.

24 THE COMMISSIONER: "Infants Of Very
25 Low Birth Weight". Now they are concerned obviously, as
the title says, with very low birth weight.



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Are they concerned with children
of lower or higher birth weight than the McMaster
study?

THE WITNESS: They probably have
similar weights, but they talk about the 692 infants
weighing 2000 grams or less at birth.

THE COMMISSIONER: Yes. Well now
would you say that those infants on the whole, the
ones in the London study, are lower or higher than
the Hamilton study? Lower in weight?

THE WITNESS: Since they don't
actually give the weights for all the babies that I
have in my notes, they just talk about deaths under
2000 grams whereas McMaster really concentrates its
efforts on 1500 grams, so I would assume that they
do include heavier babies than McMaster in their
analysis of death.

THE COMMISSIONER: I see.

So I guess you are right and I am
wrong.

MR. SCOTT: No. Dr. Rowe I think
by mistake said in McMaster.

MR. ORTVED: Than McMaster.

MR. SCOTT: Q. Or did you say
"than McMaster"?



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THE COMMISSIONER: Than McMaster.

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All right. Well, I'm not absolutely convinced from what you have said yet, Dr. Rowe, because when they are talking about under 2000 grams and somebody else is talking about 1500 grams, they are both under and it is quite possible they could be the same. However, there you are. Your position is --

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MR. SCOTT: Well, I am asking the man who has read the studies and he has told us what they dealt with.

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THE COMMISSIONER: All right. Okay. I have got you off the track.

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THE WITNESS: Well, I don't know whether I can explain it better or not, but the McMaster study was only able to find a difference in the number of deaths, the day versus night, when they analyzed those of their population which were less than 1500 grams.

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The English study found this difference when they analyzed infants who were 2000 grams or less, so in that sense the analysis means that the London study incorporates heavier babies.

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THE COMMISSIONER: All right.

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MR. SCOTT: Q. All right. Now



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we can get a copy of that paper, can we, in due course?

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A. Yes.

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Q. Now what does that paper

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tell you about the impression that you say is shared

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by you and other cardiologists with respect to death

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rates at night for young babies?

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A. Well, it is not directly

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possible to transpose because they are, as has been

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suggested, talking largely about a group of babies

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that are very low birth weight. But the English

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study through raising their level a little bit, 500

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grams (that is quite a big difference in a population

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of small babies) do suggest there is some confirmation

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of our clinical impression of babies with congenital

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heart disease, that they are more subject to death

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at night than during the day, and particularly I think

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in the English study they discuss the fact that in

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many of the deaths the terminal episodes were of

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sudden onset, apnea, cyanosis or cardiac arrest, and

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I think that is the matter of interest from the

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cardiological standpoint.

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Q. Just explain that to me again.

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Why is that a matter of interest?

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A. Because in babies who fail

to thrive and are of young age which we already know



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from the New England study means they are particularly high risk, this group is likely - may very well follow a similar pattern.

Now we don't have any data that I know of that has been done in a cardiological unit looking at babies who have failed to thrive in the first two months of age in the mode in which they die, but there is a very strong clinical impression amongst the cardiologists that these babies are at special risk and the nearest parallel we can get is the study.

Q. And the London one?

A. Yes.

MR. SCOTT: Now, can I just, Mr. Commissioner, ask two questions so we can finish with this chart?

THE COMMISSIONER: Yes.

MR. SCOTT: Q. I draw your attention on Exhibit 129, doctor, to the fact that with the exception of Monteith all the babies who died in July, August and September, and Woodcock, showed bradycardia.

Now what do you have to say about Monteith showing fibrillation?

A. There are three who showed



GG13

fibrillation I believe.

Q. Yes. Monteith I think is the only one who didn't show bradycardia as well.

A. Yes.

Q. Do you want to deal with each of them? The first I think would be Woodcock.

A. Well, Woodcock, the surprising feature of the electrical mode of death in Woodcock on the surface would be that fibrillation occurred in a baby of eighteen days who had mild congenital heart disease and I think that we already know --

Q. Can I stop you there.

For reasons that you gave yesterday you would not expect fibrillation there. You would expect bradycardia alone?

A. That is correct.

Q. All right.

A. Or fibrillation perhaps in the course of the arrest procedure but not as the primary method of dying.

Q. All right.

A. I think what is of interest there is that the autopsy revealed an infarct in the left ventricle which was unrelated to the congenital heart disease. It was related to the hypoxic stress



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that this baby had at the time of the delivery, but
it does go a long way to explaining why that baby
fibrillated, because an infarcted area is an area
in the heart that is likely to start its own
spontaneous rhythm and can lead to fibrillation.

Q. Do I take it from what you
are telling us about Woodcock that observing the
fibrillation you might have reason to question the
mode of the baby's death?

A. Yes.

Q. Because fibrillation would
be unusual in a baby that age and size?

A. Yes.

Q. But the post mortem cleared
that up for you?

A. Yes.

Q. What about Taylor who also
shows fibrillation and bradycardia and dies at three
months?

A. Well, Taylor has a very major
malformation of the heart. As it turned out that
was an inevitable death and the mass of muscle would
be compatible with the baby fibrillating. So there was
enough muscle already formed in that heart that
fibrillation could occur.



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Q. I take it that fibrillation occurs where there is a mass of muscle size normally present in a very young baby - normally not present?

A. Normally not present, that is right.



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Q. Now, last is about - well, there are some others - no, last is Monteith.

A. Well, Monteith is only two months but Monteith has an ischemic abnormality of the heart. The disease is infraction, just like an adult having an infraction. So, that individual is particularly susceptible to fibrillation on its own.

Q. Would it be that observing fibrillation one might have been concerned about the mode of dying of Taylor and Monteith initially?

A. No, I don't think so.

Q. No. Is the cause of that method of dying in fact cleared up by the post mortem?

A. Yes, I believe so.

Q. Yes.

I think those are all the questions I have at this stage, Mr. Commissioner.

THE COMMISSIONER: Any idea as to prospects?

MR. SCOTT: Yes, I will finish tomorrow morning.

THE COMMISSIONER: Oh. You don't want to tell us what time tomorrow morning? No, if you don't want to tell us.

MR. SCOTT: I'll finish by the break.



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THE COMMISSIONER: By the break. Well then we just won't suggest a break until you finish.

Mr. Ortved, how long will you be?

MR. ORTVED: I am not going to be very long, Mr. Commissioner, I will certainly complete tomorrow.

THE COMMISSIONER: Well, you won't be going on, Mr. Bogart.

MR. BOGART: Mr. Sopinka would like to cross-examine.

THE COMMISSIONER: Yes. Well, Mr. Strathy, are you prepared to go on tomorrow afternoon?

MR. STRATHY: Yes, certainly, if I am reached by that time I'll be ready to start.

THE COMMISSIONER: Yes, all right, thank you.

---Whereupon the hearing adjourned until Thursday, August 18th at 10:00 a.m.

